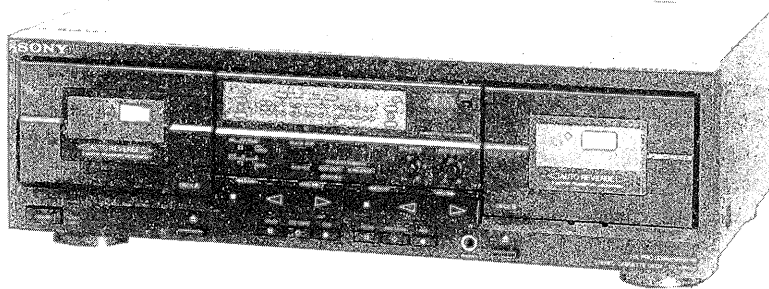


TC-WR670

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model*



Model Name Using Similar Mechanism	TC-WR620
Tape Transport Mechanism Type	deckA, B: TCM-190RB12C

SPECIFICATIONS

Recording system 4-track 2-channel stereo
Fast winding time Approx. 90 sec. (with Sony C-60 cassette)
Bias AC bias
Signal-to-noise ratio (at peak level)

Dolby NR switch Cassette	OFF	B-Type ON	C-Type ON
Type IV (Sony METAL-SLT)	58 dB	66 dB	73 dB
Type II (Sony UX-S)	57 dB	65 dB	72 dB
Type I (Sony HF-S)	55 dB	63 dB	70 dB

Total harmonic distortion 1.0% (with Sony METAL-SLT cassettes)
Frequency response (DOLBY NR OFF)

Type IV cassette (Sony METAL-SLT)	30 - 15,000 Hz (± 3 dB, IEC) 30 - 13,000 Hz (± 3 dB 0VU (-4 dB) recording]
Type II cassette (Sony UX-S)	30 - 15,000 Hz (± 3 dB, IEC)
Type I cassette (Sony HF-S)	30 - 14,000 Hz (± 3 dB, IEC)

Wow and flutter $\pm 0.13\%$ W.Peak (IEC)
0.07% WRMS (NAB)
 $\pm 0.18\%$ W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	77.5 mV
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.32 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	0.3 mW at a load impedance of 32 ohms

General

Power requirements

US, Canadian model: 120V AC, 60Hz 29W
AEP, Germany model: 220-230V AC, 50/60Hz
UK model: 240V AC, 50/60Hz
E model: 120, 220, 240V AC, 50/60Hz 29W

Power consumption 29 W

Dimensions

Approx. 430 \times 135 \times 300 mm (w/h/d)
(17 \times 5 $\frac{3}{8}$ \times 11 $\frac{7}{8}$ inches)
including projecting parts and controls

Weight

Approx. 4.7 kg (10 lbs 6 oz)


Supplied accessory

Audio connecting cords (2)

Design and specifications subject to change without notice.



Dolby noise reduction manufactured under license from
Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol  are trademarks of
Dolby Laboratories Licensing Corporation.

STEREO CASSETTE DECK
SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

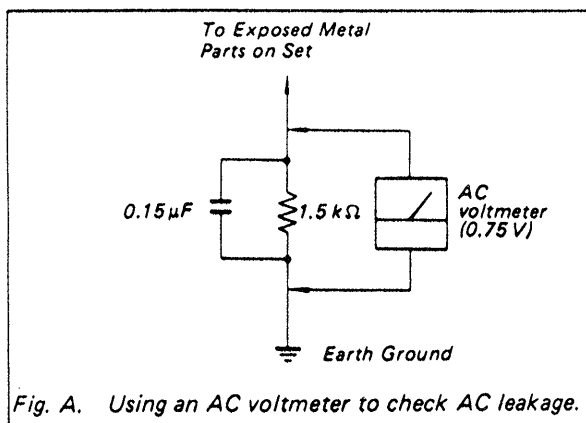


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!



COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

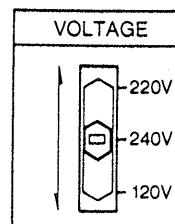
<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1.	GENERAL	3
SECTION 2.	DISASSEMBLY	4
SECTION 3.	PIN DESCRIPTION	6
SECTION 4.	ADJUSTMENTS	
	4-1. Mechanical Adjustments	8
	4-2. Electrical Adjustments	8
SECTION 5.	DIAGRAMS	
	5-1. Printed Wiring Boards	12
	5-2. Schematic Diagram	
	—System Control Section—	17
	5-3. Schematic Diagram	
	—Audio Section—	21
	5-4. Circuit Boards Location	24
	5-5. Semiconductor Lead Layouts	24
	5-6. Schematic Diagram	
	—MD Section—	25
SECTION 6.	EXPLODED VIEWS	
	6-1. Overall Section	27
	6-2. Front Panel Section	28
	6-3. Mechanism Section 1	29
	6-4. Mechanism Section 2	30
SECTION 7.	ELECTRICAL PARTS LIST	31

Operating voltage (E model)


Operate the unit on either 120, 220 or 240 V AC, 50/60 Hz. Before connecting the unit to the power source, check that the operating voltage of your unit is the same as the local power line voltage.

The voltage selector is located on the rear panel. If the selector must be reset, disconnect the AC power cord and set the selector to the appropriate voltage.

VOLTAGE Selector

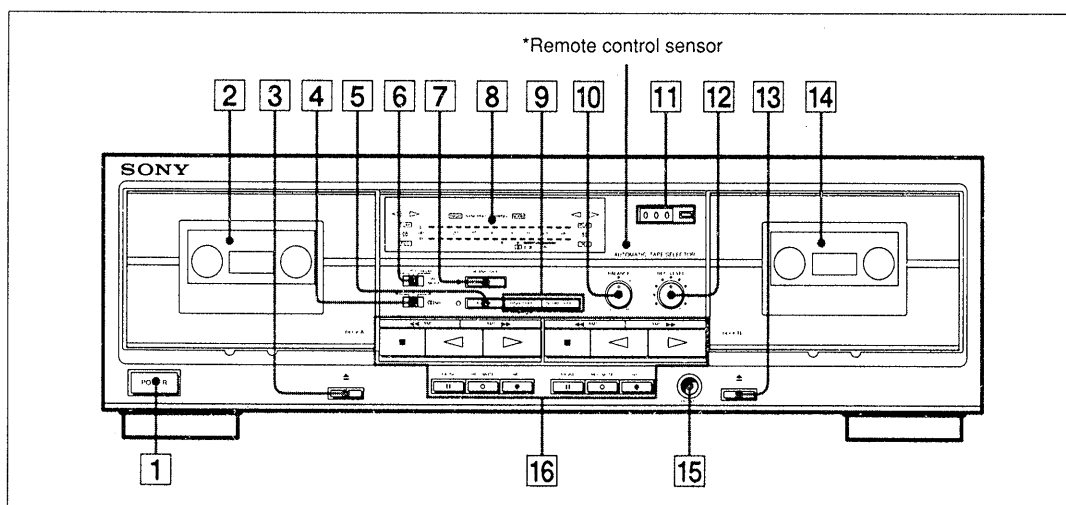


ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

This section is extracted
from instruction manual.





For details, refer to the page number indicated in ●

- | | |
|--|---|
| 1 POWER switch | 14 Deck B |
| 2 Deck A | 15 PHONES (headphones) jack (stereo phone jack) |
| 3 ▲ (eject) button (deck A) | 16 Tape operation buttons |
| 4 □ NR (Dolby noise reduction) switch ● 7 11 14 16 | ■ (stop) button |
| 5 A+B REC (simultaneous recording) button and indicator 11 | ◀◀ (leftward fast winding)(AMS**) button |
| 6 DIR (direction) MODE switch ● 7 8 11 14 15 16 | ◀ (reverse play) button |
| 7 BLANK SKIP button and indicator ● 7 9 16 | ▶ (forward play) button |
| 8 Display panel | ▶▶ (rightward fast winding)(AMS**) button |
| 9 SYNCHRO DUBBING buttons 16 | PAUSE button |
| HIGH SPEED button | ○ REC MUTE (record muting) button 15 |
| NORM (normal) SPEED button | ● REC (recording) button |
| 10 BALANCE control 11 | |
| 11 Tape COUNTER and RESET button | |
| 12 REC (recording) LEVEL control 11 12 | |
| 13 ▲ (eject) button (deck B) | |

*Remote control sensor

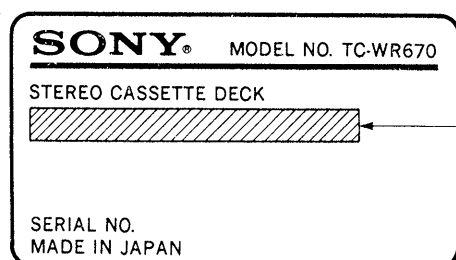
You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark and cassette deck control capability.

**AMS is an abbreviation for Automatic Music Sensor.

MODEL IDENTIFICATION

—Specification Label—



US, Canadian model: AC120V 60Hz 29W
AEP, Germany model: AC220-230V~50/60Hz
UK model: AC240V~50/60Hz
E model: AC120, 220, 240V~50/60Hz 29W

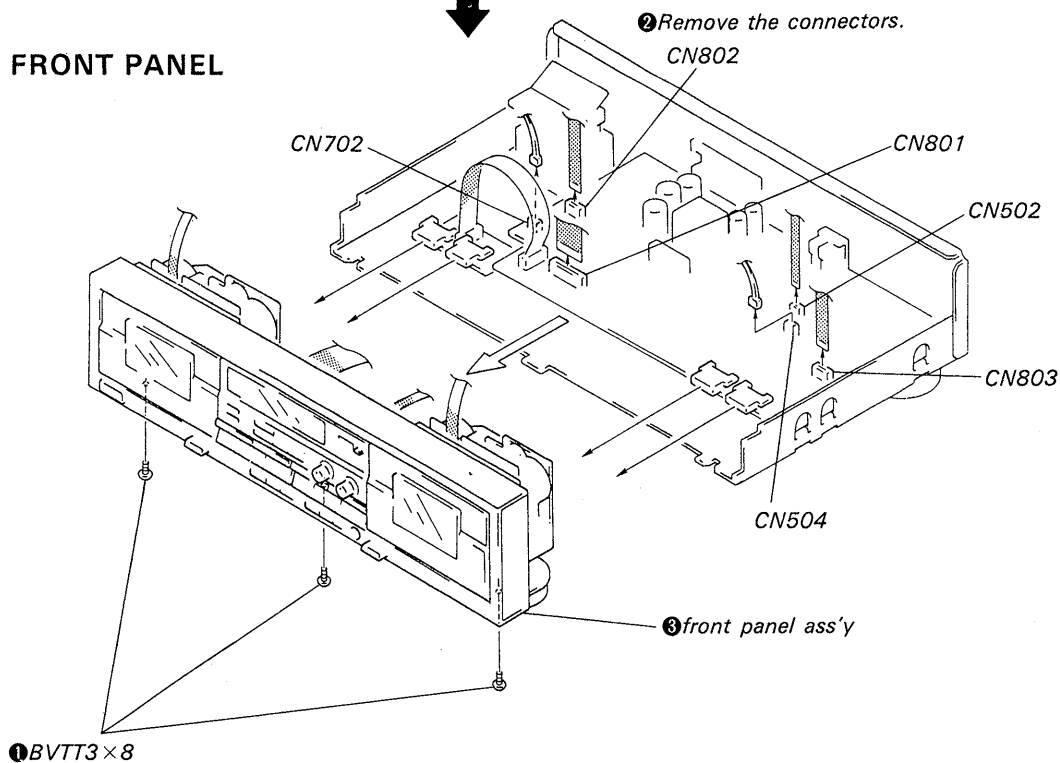
SECTION 2 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

CASE

Unscrew the four case attachment screws M3×8 and remove the case.

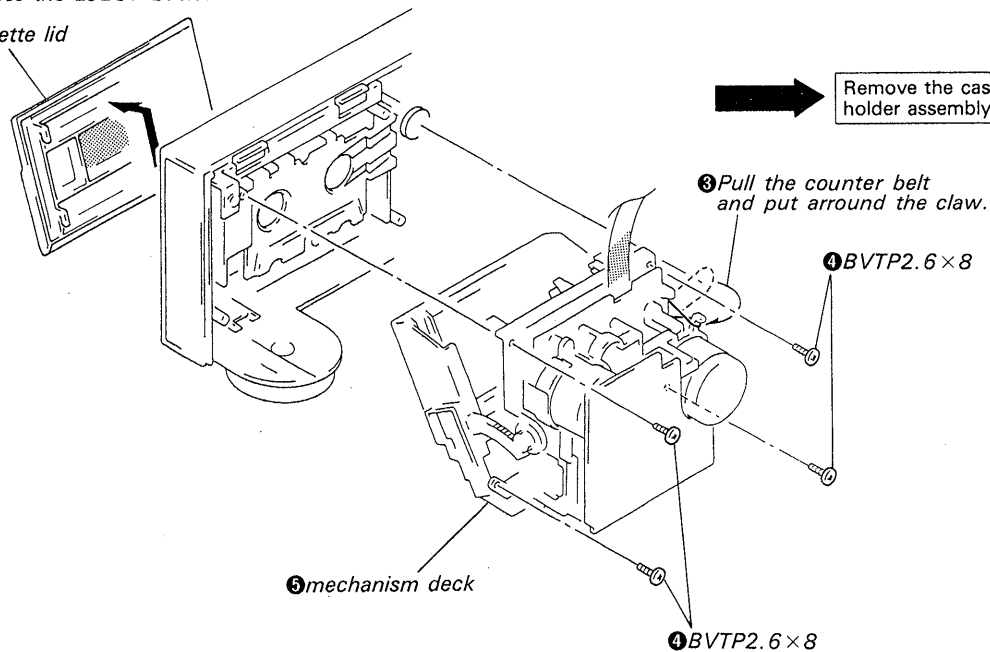
FRONT PANEL



MECHANISM DECK

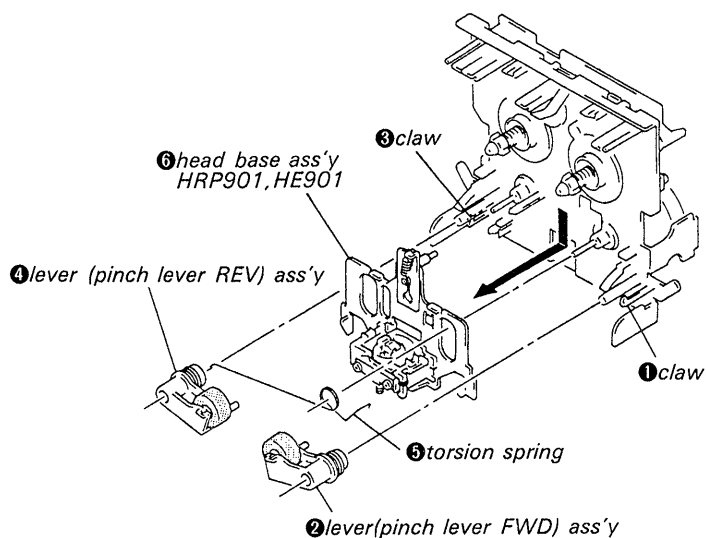
1 Press the EJECT button.

2 cassette lid

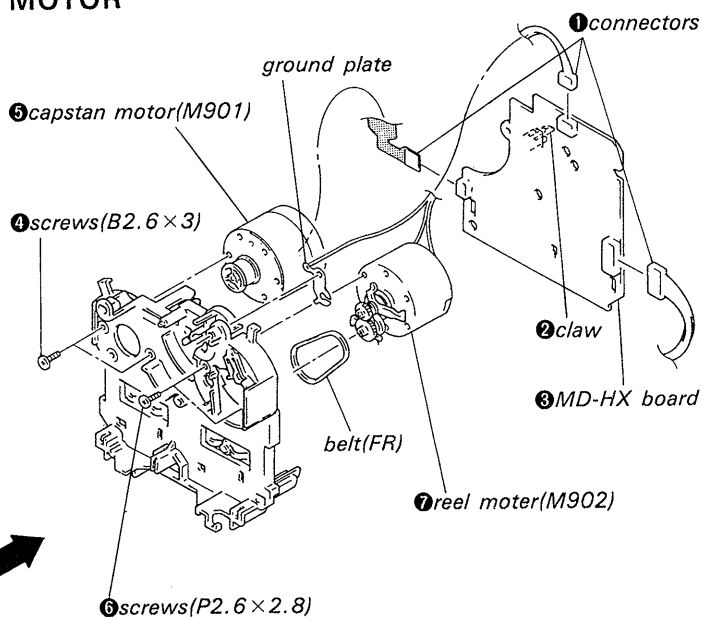


Remove the cassette holder assembly.

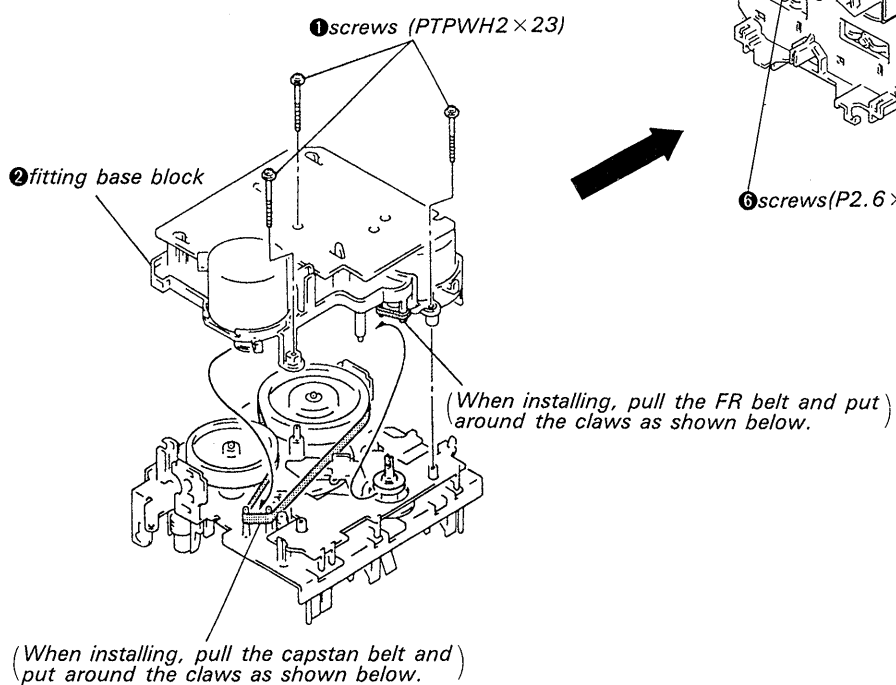
HEAD



MOTOR



FITTING BASE BLOCK



SECTION 3

PIN DESCRIPTION

●IC801 M50944-170SP (MICRO COMPUTER)

The M50944-170SP function are described below.

Pin No.	Name	I/O	Description
1	V _{REF}	I	Inputs reference voltage to the A-D converter.
2 9	IN ₇ IN ₀	I	An 8-bit analog input pin for the A-D converter. It can be used as a normal input port.
10	P4 ₇ /S _{RDY2}	I/O	Port P4 is an 8-bit input/output port, and it provides almost same function as port P0. Further, P4 ₂ and P4 ₃ are used in common with INT ₃ and INT ₄ respectively. If P4 ₄ , P4 ₅ , P4 ₆ and P4 ₇ use serial I/O ₂ , they become S _{IN2} , S _{OUT2} , CLK ₂ and S _{RDY2} pints respectively. The output format is CMOS.
11	P4 ₆ /CLK ₂		
12	P4 ₅ /S _{OUT2}		
13	P4 ₄ /S _{IN2}		
14	P4 ₃ /INT ₄		
15	P4 ₂ /INT ₃		
16	P4 ₁		
17	P4 ₀		
18	P3 ₇ /S _{RDY1}	I/O	Port P3 is an 8 bit input/output port, and it provides almost same function as port P0. Further, P3 ₀ , P3 ₁ , P3 ₂ and P3 ₃ are used in common with INT ₁ , INT ₂ , CNTR and T respectively. If P3 ₄ , P3 ₅ , P3 ₆ and P3 ₇ use serial I/O ₁ , they become S _{IN1} , S _{OUT1} , CLK ₁ and S _{RDY1} pints respectively. The output format is CMOS.
19	P3 ₆ /CLK ₁		
20	P3 ₅ /S _{OUT1}		
21	P3 ₄ /S _{IN1}		
22	P3 ₃ /T		
23	P3 ₂ /CNTR		
24	P3 ₁ /INT ₁		
25	P3 ₀ /INT ₁		
26	CNV _{SS}	—	Connect to V _{SS} .
27	RESET	I	Rest status is activated when the RESET signal gose "L" for more than 2μs. However, if it takes more time to stabilize the oscillation of crystal resonator, etc., apply "L" level for duration meeting that time.
28	X _{IN}	I	Input/output of main clock generation circuit. A clock generation circuit is built in, and the oscillation frequency is set by connecting a ceramic resonator or crystal oscillator between X _{IN} and X _{OUT} . If external clock is to be used, connect the clock source to X _{IN} and open the X _{OUT} .
29	X _{OUT}	O	
30	X _{CIN}	I	Input/output of clock generation circuit for clock. To set the oscillation frequency, connect a ceramic resonator or crystal oscillator between X _{CIN} and X _{COUT} . If external clock is to be used, connect the clock source to X _{CIN} and open the X _{COUT} . This clock can also be used as a system clock by the program setting.
31	X _{COUT}	O	
32	V _{SS}	—	Apply 5V±10% to V _{CC} and 0V to V _{SS} .

Pin No.	Name	I/O	Description
33	ϕ	0	Outputs the timing signal.
34 37	R ₃ R ₀	I	Port R is a 4-bit input port.
38	NC	—	(Short-circuit to V _{DD})
39 46	P1 ₇ P1 ₀	I/O	Port P1 is an 8-bit input/output port, and it provides almost same function as port P0.
47 54	P0 ₇ P0 ₀	I/O	Port P0 is an 8-bit input/output port. The I/O register is built in, and whether this port is to be used for input or output can be selected for each bit by the program. The input mode is selected at the reset. Output is executed in the N-channel open drain format, and a pull-up transistor can optionally be inserted between P0 and V _{CC} .
55 62	P2 ₇ P2 ₀	I/O	Port P2 is an 8-bit input/output port, and it provides almost same function as port P0.
63	AV _{CC}	—	Inputs power supply to the A-D converter.
64	V _{CC}	—	Apply 5V±10% to V _{CC} and 0V to V _{SS} .

SECTION 4 ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured alcohol-moistened swab :

record/playback/erase head	pinch roller
rubber belts	capstan
idlers	
- Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustment.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Standard Input Level

Input terminal	LINE IN
source impedance	10k Ω
input signal level	0.25V (−10dB)

Standard Output Level

Output terminal	LINE OUT
load impedance	47k Ω
output signal level	0.44V (−5dB)

Test Tape

Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

$$0\text{dB} = 0.775\text{V}$$

Torque Measurement

Torque	Torque meter	Meter reading
Forward	C Q-102C	30 to 65g · cm (0.42 to 0.9 oz · inch)
Forward back tension	C Q-102C	DECK A : 1 to 6g · cm (0.014 to 0.08 oz · inch) DECK B : 2 to 9g · cm (0.03 to 0.12 oz · inch)
Reverse	C Q-102RC	30 to 65g · cm (0.42 to 0.9 oz · inch)
Reverse back tension	C Q-102RC	1 to 6g · cm (0.014 to 0.08 oz · inch)
Forward, Reverse	C Q-201B	70 to 120g · cm (0.98 to 1.67 oz · inch)

Test Mode

Short the test point CN804

(place the IC801 pin 6 in "L" status) on the MAIN board with the power turned off, then turn the power on before adjustment.

Executes high speed dubbing when the HIGH SPEED (DUBBING) button is pressed during dubbing.

When pressing this button again, the normal speed dubbing is restored.

After adjustment, break the short condition.

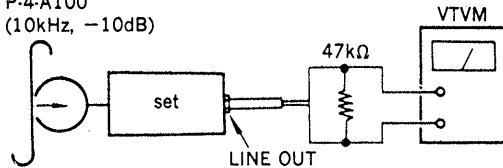
The DECK A and B can be adjusted in the same manner.

Record/Playback Head Azimuth Adjustment

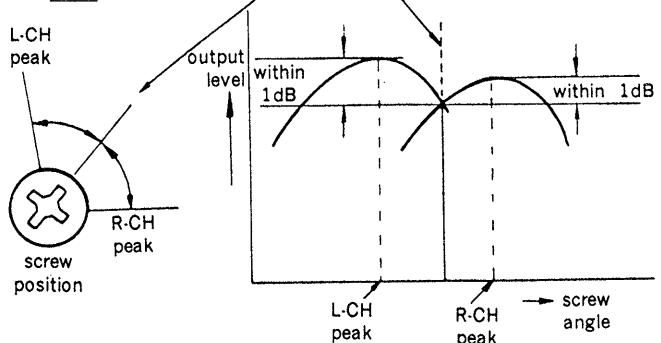
Procedure :

- Forward Playback Mode

test tape
P-4-A100
(10kHz, −10dB)



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

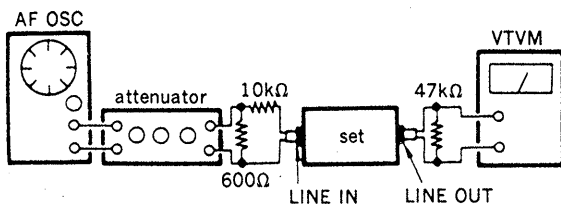


4-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

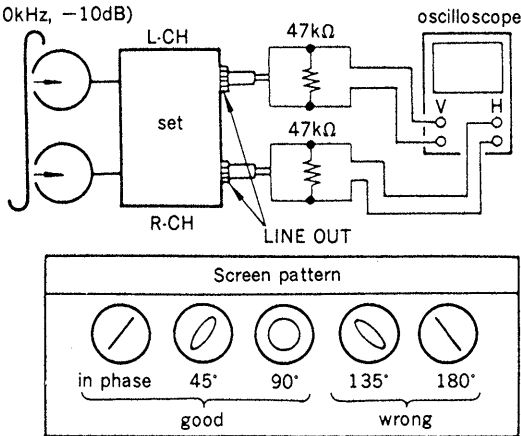
- The adjustment should be performed in the publication.
(Be sure to make playback adjustment at first.)
- The adjustment and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF
DIR MODE switch : \rightleftharpoons
 - Standard record position
Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

—Record Mode—



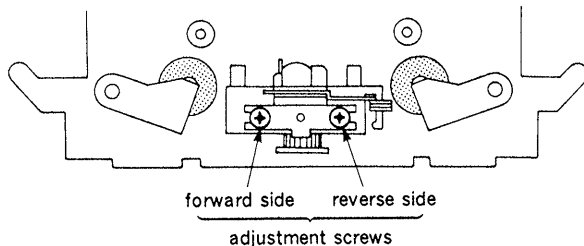
3. Playback Mode

test tape
P-4-A100
(10kHz, -10dB)



4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : —record/playback head—

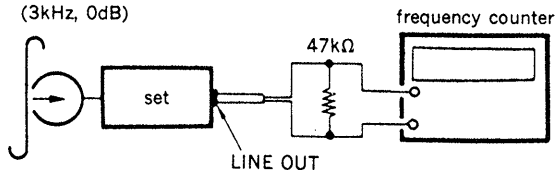


Tape Speed Adjustment

Procedure :

—Forward Playback Mode—

test tape
WS-48B
(3kHz, 0dB)



Perform high speed adjustment before normal speed adjustment.

(high speed adjustment)

1. Short test pin CN804 on MAIN board.
2. Set to FWD playback mode.
3. Keep on pressing the HIGH SPEED DUBBING switch.
4. Adjust RV72 so that the frequency counter reading becomes $6,000 \pm 20\text{Hz}$.
5. After adjustment, disconnect CN804 shorted in step 1.

(normal speed adjustment)

1. Set to FWD playback mode.
2. Adjust RV71 so that the frequency counter reading becomes $3,000 \pm 10\text{Hz}$.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

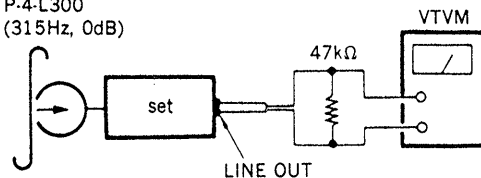
Adjustment Location : AUDIO board

Playback Level Adjustment

Procedure :

—Forward Playback Mode—

test tape
P-4-L300
(315Hz, 0dB)



Adjust deck A, B : RV11 (L-CH) and RV21 (R-CH) so the VTVM reading becomes the adjustment limits below.

Adjustment Value :

LINE OUT level : $-5 \pm 0.5\text{dB}$ (0.412 to 0.461V)

Level Difference between Channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

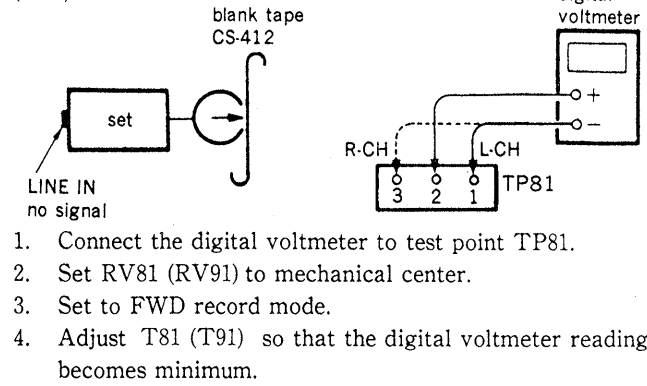
Adjustment Location : AUDIO board

Bias Consumption Current Adjustment

This adjustment should be performed when replacing the head assy or the bias oscillating transformer (T81, T91).

Procedure :

() : R-CH



Adjustment Location : AUDIO board

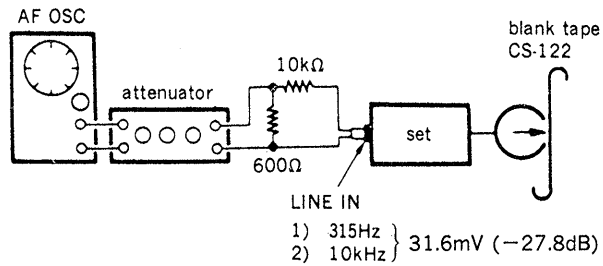
Record Bias Adjustment

Setting :

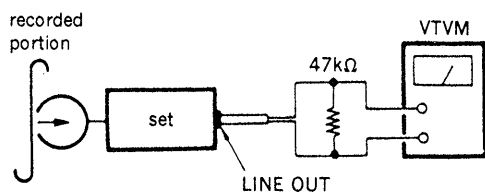
REC LEVEL control : standard record position (Refer to page 8.)

Procedure :

1. Record Mode



2. Playback Mode



Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV81 (L-CH), RV91 (R-CH) and repeat the steps given above.

Adjustment Location : AUDIO board

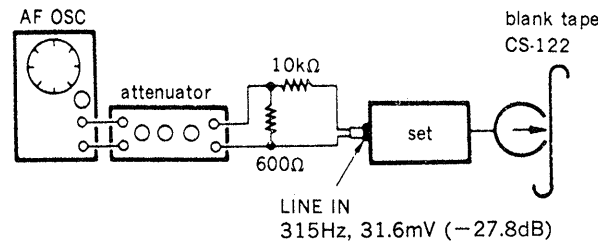
Record Level Adjustment

Setting :

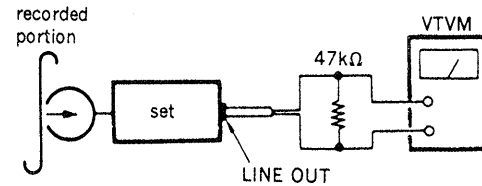
REC LEVEL control : standard record position (Refer to page 8.)

Procedure :

1. Record Mode



2. Playback Mode



Confirm playback the tape recorded become adjustment level as follows.

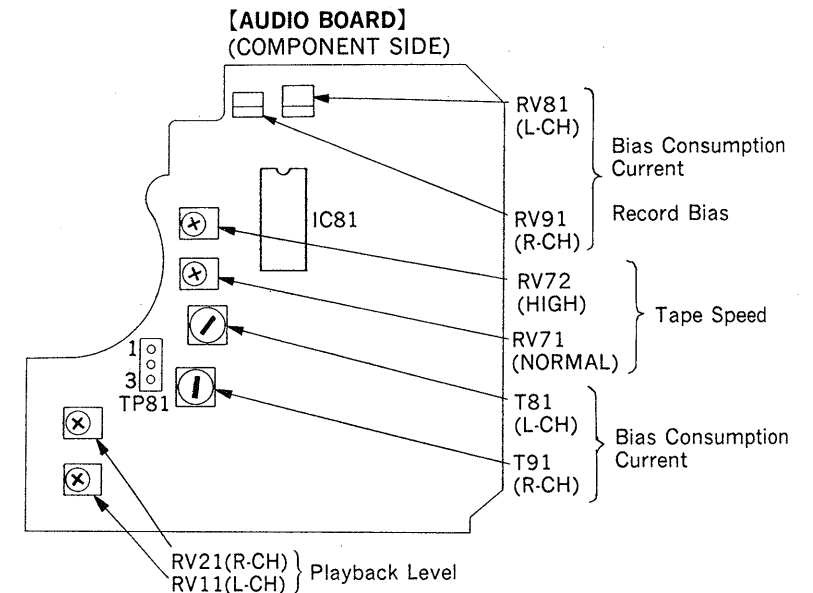
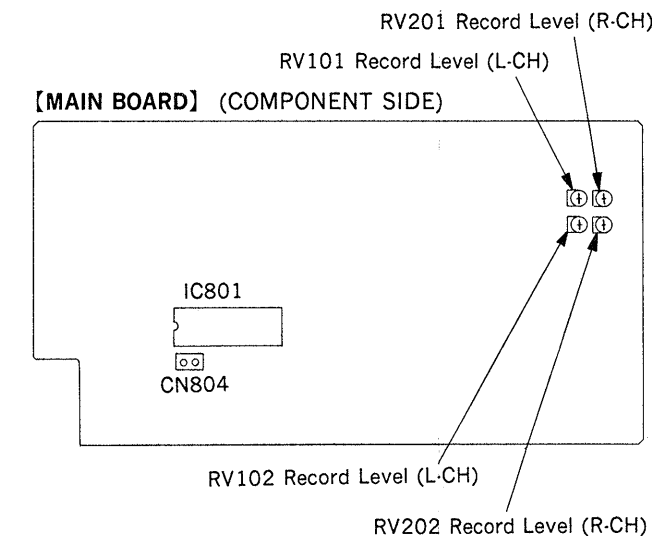
If necessary, adjust RV101, 102 (L-CH), RV201, 202 (R-CH) and repeat steps 1 and 2.

Adjustment Value :

LINE OUT level : $-27.8 \pm 0.5\text{dB}$ (29 to 33.4mV)

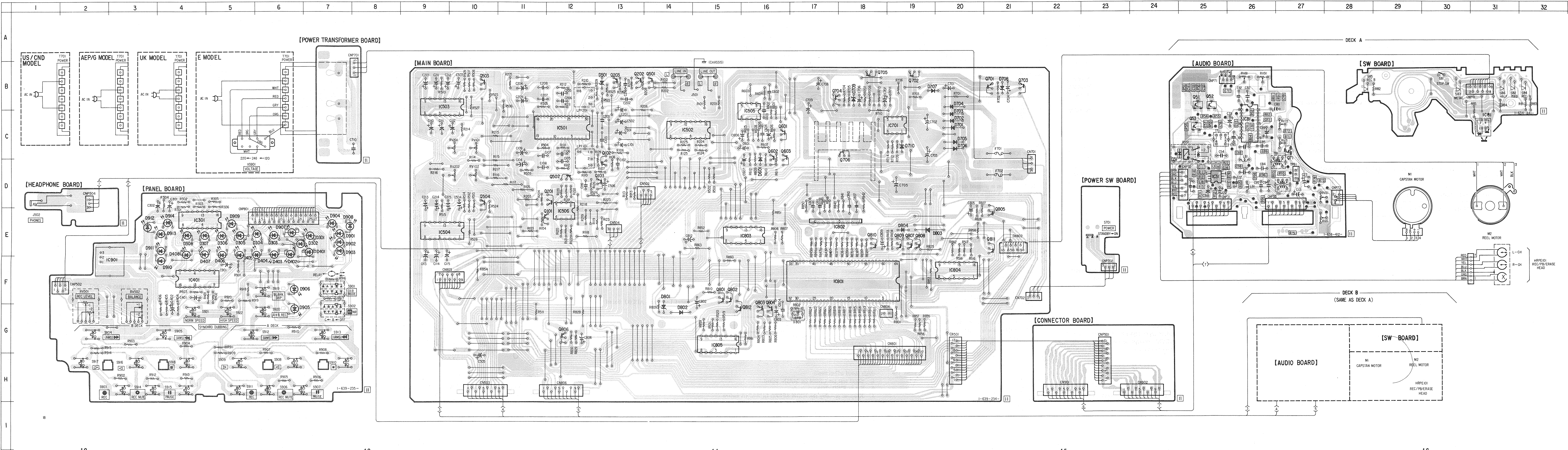
Adjustment Location : MAIN board

—Adjustment Parts Location Diagrams—



SECTION 5
DIAGRAMS

5-1. PRINTED WIRING BOARDS •See page 24 for Circuit board Location and Semiconductor Lead Layouts.



[PANEL BOARD]

[HEADPHONE BOARD]

IC301 METER L CONTROL

IC401 METER R CONTROL

IC801 SYSTEM CONTROL

IC802 REEL MOTOR DRIVE

IC803 INVERTER

IC901 REMOTE CONTROL RECEIVER

Legend:

- Capacitors: μ F unless otherwise noted; pF: μ F
- Resistors: Ω and $\frac{1}{4}$ W or less unless otherwise specified
- % : indicates tolerance
- Adjustment for repair: \square
- AC voltage readings in the bias oscillator with a VTVM
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions
- no mark : STOP
- < : NORMAL SPEED DUBBING
- FWD : FWD
- REV : REV
- FF : FF
- REW : REW
- REC : REC
- Waveforms are taken with an oscilloscope
- Signal path
- PB (DECK A)
- RE (DECK A)

Ref. No.	Location	Ref. No.	Location
D31	C-24	IC701	C-19
D301	E-7	IC801	E-17
D302	E-6	IC802	F-17
D303	E-6	IC803	E-16
D304	E-6	IC804	F-20
D305	E-5	IC805	G-15
D306	E-5	IC901	F-3
D307	E-4		
D308	E-4	Q51	B-25
D401	E-7	Q52	B-25
D402	E-6	Q53	C-25
D403	E-6	Q71	C-27
D404	E-6	Q101	E-12
D405	E-5	Q102	C-13
D406	E-5	Q103	D-13
D407	E-8	Q201	D-12
D408	E-8	Q202	B-13
D501	B-13	Q203	B-13
D601	D-16	Q501	B-14
D701	C-20	Q502	D-12
D702	C-20	Q503	B-10
D703	C-20	Q504	D-10
D704	B-20	Q601	C-16
D705	C-20	Q602	C-16
D706	C-20	Q603	C-16
D707	B-19	Q701	B-19
D708	B-21	Q702	B-19
D709	B-18	Q703	B-21
D710	C-19	Q704	B-17
D801	G-14	Q705	B-18
D802	G-14	Q706	C-18
D803	E-19	Q801	F-15
D804	E-19	Q802	F-15
D901	E-7	Q803	G-16
D902	E-7	Q804	G-16
D903	E-7	Q805	E-21
D904	E-7	Q806	G-12
D905	G-6	Q807	E-19
D906	F-6	Q808	E-19
D907	E-6	Q809	E-19
D908	E-7	Q810	E-18
D909	E-5	Q811	E-21
D910	E-4	Q812	G-15
D911	E-4		
D912	E-3		
D913	E-4		
D914	E-4		
IC31	D-25		
IC28 (AUDIO)	C-26		
IC81 (SW)	C-31		
IC301	E-4		
IC401	F-4		
IC501	C-12		
IC502	C-14		
IC503	B-9		
IC504	E-9		
IC505	B-16		
IC506	E-12		

- ▶ : FWD ◀ : REV
- ▶▶ : FF ◀◀ : REW ● :
- Waveforms are taken with an oscilloscope.
- Signal path.
 - Σ : PB (DECK A)
 - Σ▶ : REC (DECK A)

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.

- \square : B+ Line
- \square : B- Line
- \square : adjustment for repair.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : STOP
- \blacktriangleright : FWD \blacktriangleleft : REV \bullet : REC

- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.

- \Rightarrow : PB (DECK A)
- \Rightarrow : REC (DECK A)
- \Rightarrow : PB (DECK B)
- \Rightarrow : REC (DECK B)

Note:

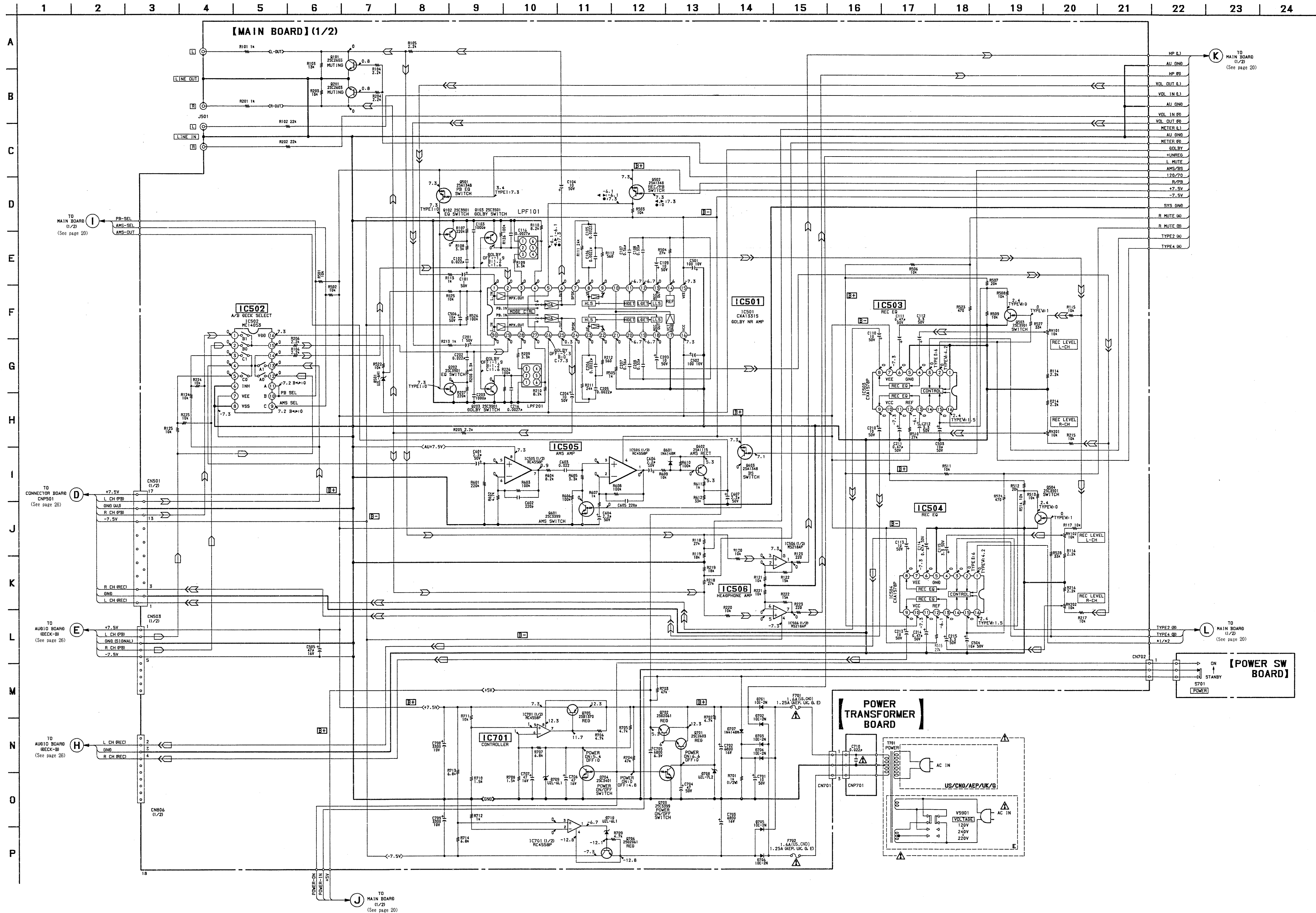
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:

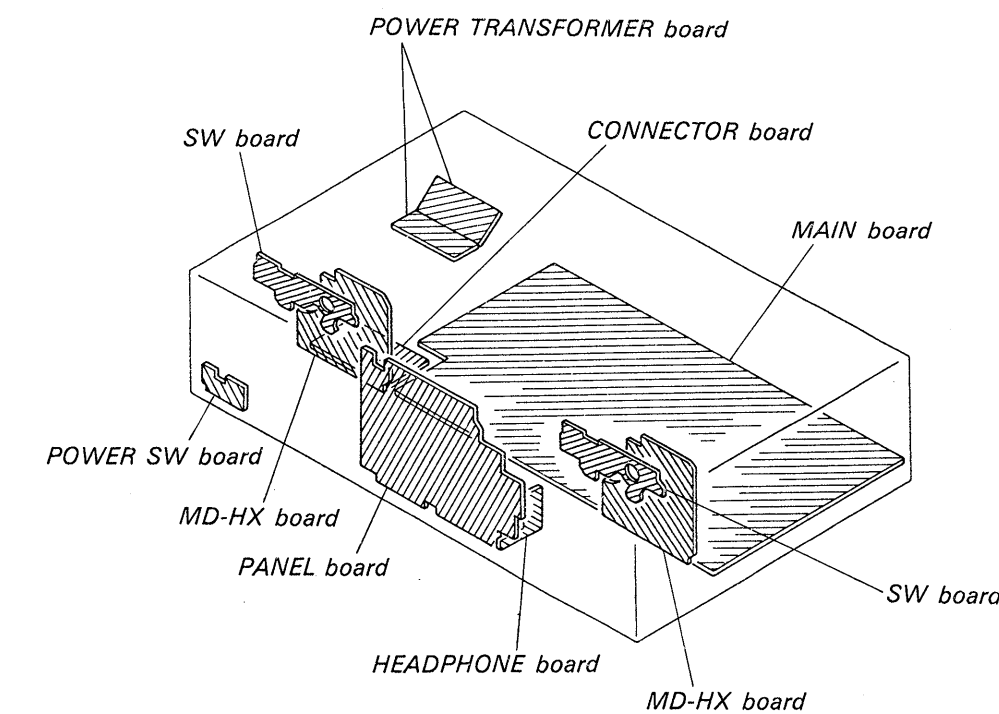
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- CND : Canadian model
- G : Germany model

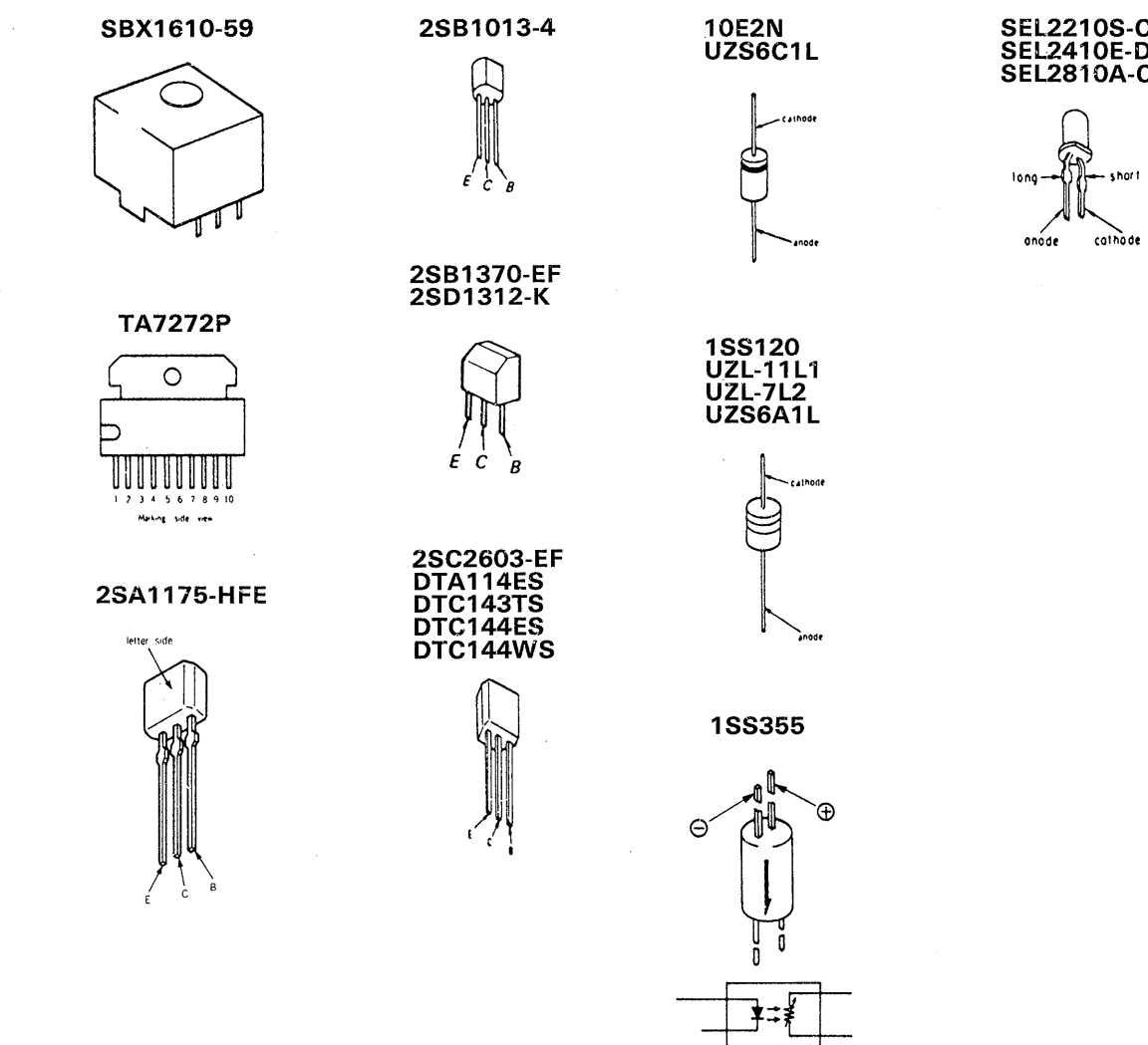
5-3. SCHEMATIC DIAGRAM — Audio Section —



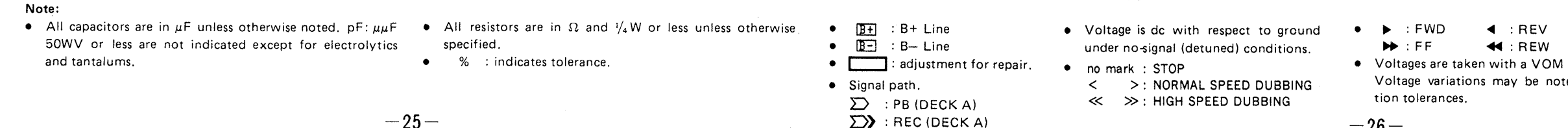
5-4. CIRCUIT BOARDS LOCATION



5-5. SEMICONDUCTOR LEAD LAYOUTS








	1	2	3	4	5	6	7	8	9	10	11	12	13	14
--	---	---	---	---	---	---	---	---	---	----	----	----	----	----



- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$
50WV or less are not indicated except for electrolytics
and tantalums.

- All resistors are in Ω and $1/4$ W or less unless otherwise specified.
- % : indicates tolerance.

-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Signal path.
 : PB (DECK A)
 : REC (DECK A)

- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : STOP
 - < > : NORMAL SPEED DUBBING
 - << >> : HIGH SPEED DUBBING

- ▶ : FWD ◀ : REV
 - ▶▶ : FF ◀◀ : REW
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.

SECTION 6

EXPLODED VIEWS



NOTE:


- — XX, — X mean standardized parts, so they may have some differences from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Color Indication of Appearance Parts
Example:
KNOB, BALANCE(WHITE)...(RED)

↑
Part's Color

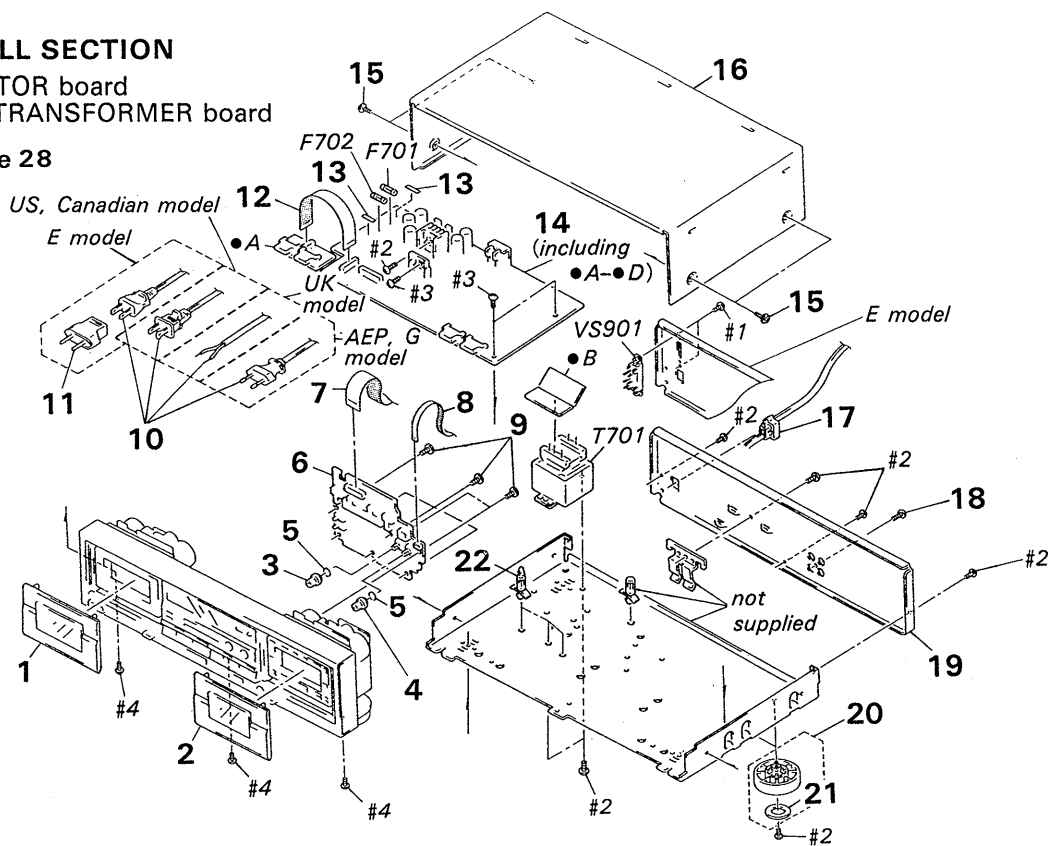
↑
Cabinet's Color
- Hardware (#mark) list is given in the last of this parts list.
- G : Germany

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. OVERALL SECTION

- A: CONNECTOR board
- B: POWER TRANSFORMER board
- C } See page 28
- D }

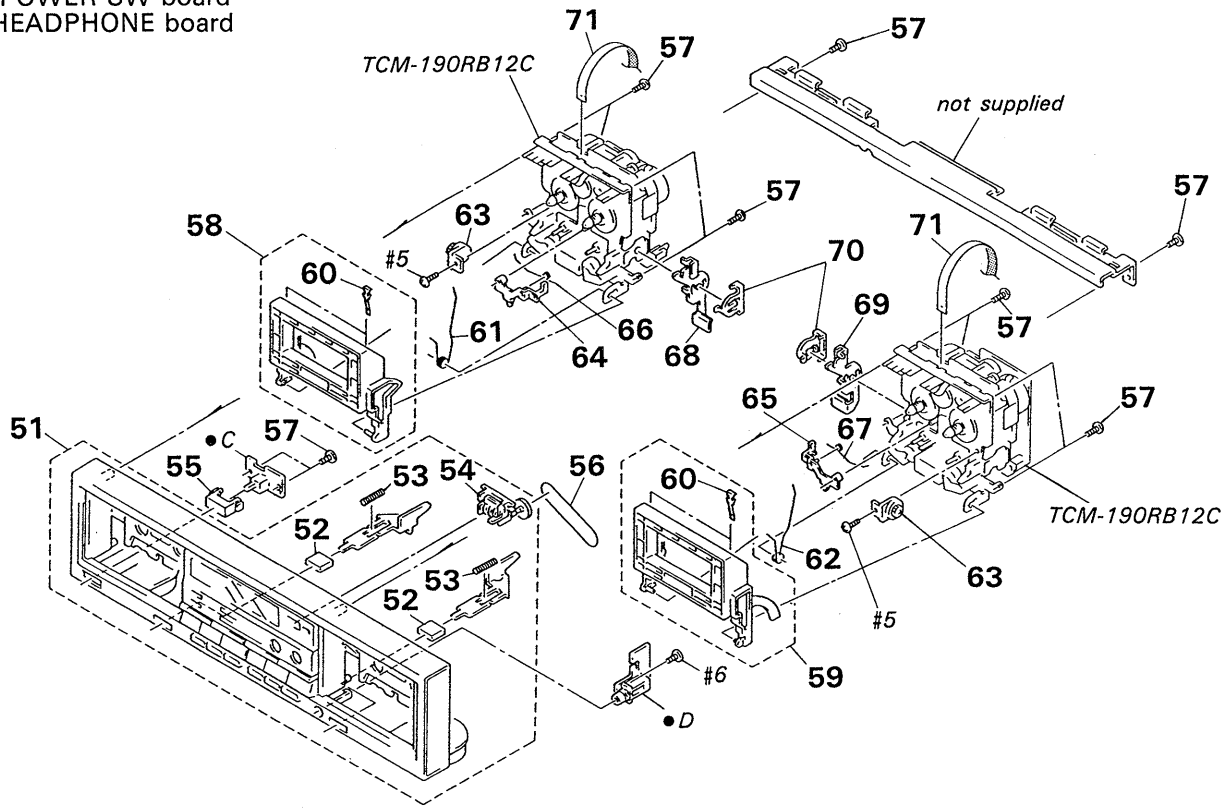


Ref. No.	Part No.	Description	Remark
1	X-3362-988-1	LID (A) ASSY. CASSETTE	
2	X-3362-989-1	LID (B) ASSY. CASSETTE	
3	3-367-431-01	KNOB (BAL)	
4	3-367-431-11	KNOB (REC)	
5	3-356-957-01	SPRING	
6	* A-2006-443-A	PANEL BOARD, COMPLETE	
7	1-590-826-11	WIRE, FLAT TYPE (27 CORE)	
8	1-575-663-11	WIRE, FLAT TYPE (5 CORE)	
9	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
10	⚠ 1-555-795-00	CORD, POWER, EULO PLUG (AEP, G)	
10	⚠ 1-551-506-XX	CORD, POWER (US, Canadian)	
10	⚠ 1-556-035-00	CORD, POWER (UK)	
10	⚠ 1-551-188-XX	CORD, POWER (E)	
11	⚠ 1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
12	1-575-218-11	WIRE, FLAT TYPE (17 CORE)	
13	3-701-947-12	LABEL (T1.25A), FUSE (AEP, UK, G)	
14	* A-2006-442-A	MAIN BOARD, COMPLETE	
15	3-704-366-01	SCREW (CASE) (M3X8)	
16	* 4-929-294-42	CASE	
17	* 3-703-244-00	BUSHING (2104), CORD (AEP, UK, G)	
17	* 3-703-571-11	BUSHING (S) (4516), CORD (US, Canadian, E)	
18	7-621-849-00	SCREW (BV/RING)	

Ref. No.	Part No.	Description	Remarks
19	* 3-365-372-01	PANEL, BACK (US, Canadian)	
19	* 3-365-372-11	PANEL, BACK (UK)	
19	* 3-365-372-31	PANEL, BACK (AEP, G)	
19	* 3-365-372-41	PANEL, BACK (E)	
20	X-4885-950-1	FOOT ASSY (US, Canadian)	
20	X-3304-938-2	FOOT ASSY (AEP, UK, G, E)	
21	4-923-836-11	CUSHION	
22	* 3-346-265-11	HOLDER, PC BOARD	
F701	△ 1-532-285-00	FUSE, TIME-LAG 1.25A (AEP, UK, G, E)	
F701	△ 1-532-741-11	FUSE, GLASS TUBE 1.6A (US, Canadian)	
F702	△ 1-532-285-00	FUSE, TIME-LAG 1.25A (AEP, UK, G, E)	
F702	△ 1-532-741-11	FUSE, GLASS TUBE 1.6A (US, Canadian)	
T701	△ 1-449-420-21	TRANSFORMER, POWER (US, Canadian)	
T701	△ 1-449-666-21	TRANSFORMER, POWER (E)	
T701	△ 1-450-465-11	TRANSFORMER, POWER (AEP, UK, G)	
VS901	△ 1-570-307-11	SWITCH, VOLTAGE CHANGE (VOLTAGE) (E)	

6-2. FRONT PANEL SECTION

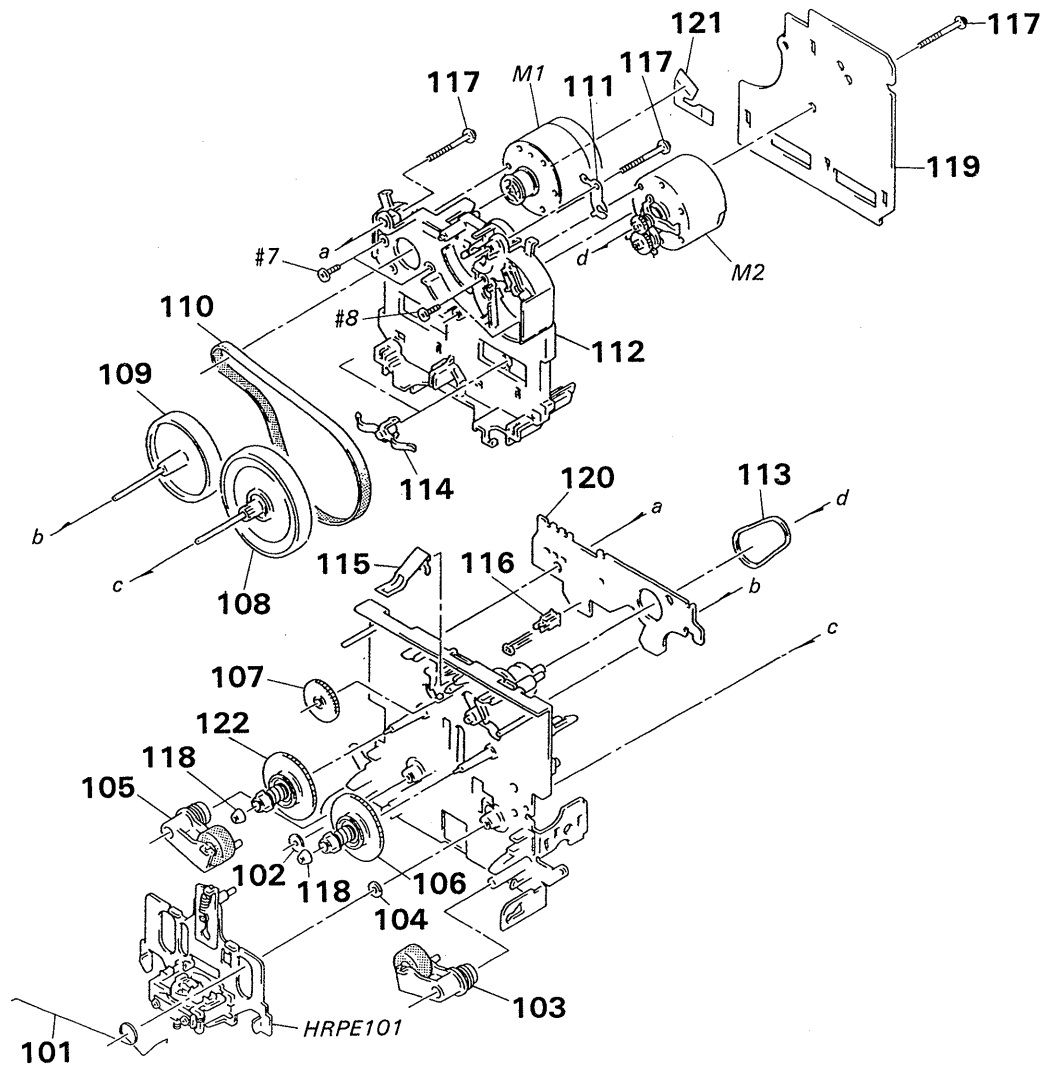
- C: POWER SW board
- D: HEADPHONE board



Ref. No.	Part No.	Description	Remark
51	X-3362-991-1	PANEL ASSY, FRONT (US, Canadian)	
51	X-3362-990-1	PANEL ASSY, FRONT (AEP, UK, G, E)	
52	3-340-188-11	BUTTON (EJECT)	
53	3-363-762-01	SPRING, COMPRESSION	
54	1-548-596-41	COUNTER, TAPE (MIDDLE TYPE)	
55	3-354-932-01	BUTTON (POWER)	
56	3-499-042-XX	BELT, COUNTER	
57	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
58	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
59	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
60	3-308-823-11	SPRING	

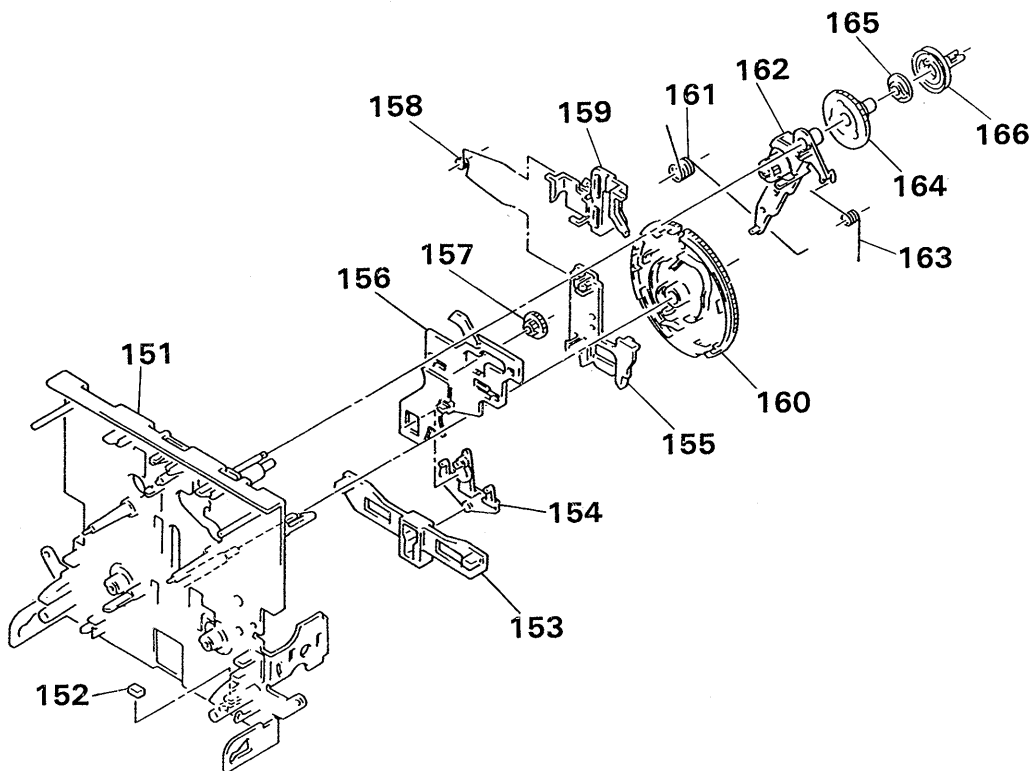
Ref. No.	Part No.	Description	Remark
61	3-354-960-01	SPRING (LOADING R), TORSION	
62	3-354-959-01	SPRING (LOADING L), TORSION	
63	3-354-963-01	DAMPER	
64	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
65	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
66	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
67	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
68	* 3-354-954-01	LEVER (LOCK LEVER R)	
69	* 3-354-953-01	LEVER (LOCK LEVER L)	
70	3-354-957-01	JOINT (LOCK LEVER)	
71	* 1-575-850-11	WIRE, FLAT TYPE (9 CORE)	

6-3. MECHANISM SECTION 1 (TCM-190RB12C)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING, TORSION		114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
102	3-356-714-01	WASHER		115	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		116	3-343-419-01	HOLDER (S SENSOR A)	
104	3-356-713-01	WASHER		117	3-359-414-01	SCREW (+PTPWH 2X23)	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY		118	3-362-308-01	CAP (REEL)	
106	X-3359-404-1	TABLE ASSY, REEL		119	* A-2006-401-A	MOUNTED PCB (RB12A), AUDIO	
107	3-359-424-01	GEAR (REV GEAR)		120	* 1-634-841-11	SW BOARD	
108	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY		121	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
109	X-3359-410-1	FLYWHEEL (REV) ASSY		122	X-3362-078-1	TABLE ASSY (B), REEL	
110	3-359-417-01	BELT (FLAT), CAPSTAN		HRPE101	A-2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE)	
111	3-359-450-01	PLATE, GROUND		M1	X-3359-417-1	MOTOR (CAPSTAN) ASSY	
112	* 3-359-436-01	BASE (THRUST RETAINER), FITTING		M2	A-2003-474-A	MOTOR (REEL) ASSY	
113	3-359-466-01	BELT (FR), SQUARE					

6-4. MECHANISM SECTION 2
(TCM-190RB12C)



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL		159	3-359-429-01	SLIDER (BRAKE PLATE)	
152	3-359-469-01	SPACER		160	3-359-420-01	GEAR (CAM GEAR)	
153	* 3-359-425-01	SLIDER (REVERSE SLIDER)		161	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
154	3-359-426-01	LEVER (REVERSE LEVER)		162	X-3359-405-1	LEVER (FR ARM) ASSY	
155	* 3-359-427-01	SLIDER (LEVERSE SLIDER)		163	3-359-453-01	SPRING (FR ARM), TORSION	
156	* 3-359-415-01	SLIDER (TRIGGER SLIDER)		164	3-359-419-01	GEAR (FR GEAR)	
157	3-359-448-01	GEAR (TRIGGER)		165	3-359-421-01	CLUTCH (REEL DISK)	
158	3-359-454-01	SPRING, TORSION		166	3-359-418-01	PULLEY (FR PULLEY)	

SECTION 7

ELECTRICAL PARTS LIST

AUDIO

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

● RESISTORS

All resistors are in ohms
 METAL: Metal-film resistor
 METAL OXIDE: Metal Oxide-film resistor
 F: nonflammable

● SEMICONDUCTORS

In each case, u: μ , for example:
 uA...: μ A..., uP A...: μ P A...,
 uP B...: μ P B..., uP C...: μ P C...,
 uP D...: μ P D...

- G: Germany

● CAPACITORS

uF: μ F

● COILS

uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* A-2006-401-A	AUDIO BOARD, COMPLETE *****					
		< CAPACITOR >					
C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C91	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C12	1-136-157-00	FILM 0.022uF	5% 50V	C92	1-136-157-00	FILM 0.022uF	5% 50V
C13	1-124-234-00	ELECT 22uF	20% 16V	C93	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C94	1-136-437-11	FILM 220PF	5% 630V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C95	1-136-433-11	FILM 100PF	5% 630V
C22	1-136-157-00	FILM 0.022uF	5% 50V	C96	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V	C97	1-136-273-91	FILM 75PF	5% 630V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C98	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V	C99	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C32	1-124-234-00	ELECT 22uF	20% 16V			< CONNECTOR >	
C33	1-124-234-00	ELECT 22uF	20% 16V	CNP31	* 1-580-782-11	SOCKET, CONNECTOR	
C51	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	CNP32	* 1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
C52	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	CNP33	* 1-580-782-11	SOCKET, CONNECTOR	
C53	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	CNP71	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C54	1-136-601-11	FILM 0.01uF	5% 630V	CNP72	* 1-580-411-11	SOCKET, CONNECTOR 4P	
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V			< DIODE >	
C57	1-164-346-11	CERAMIC CHIP 1uF	16V	D31	8-719-988-62	DIODE 1SS355	
C71	1-164-346-11	CERAMIC CHIP 1uF	16V			< IC >	
C80	1-124-234-00	ELECT 22uF	20% 16V	IC31	8-759-970-67	IC LM833M	
C81	1-164-232-11	CERAMIC CHIP 0.01uF	50V	IC81	8-759-106-56	IC uPC1297CA	
C82	1-136-157-00	FILM 0.022uF	5% 50V			< COIL >	
C83	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	L81	1-410-780-11	INDUCTOR 27mH	
C84	1-136-437-11	FILM 220PF	5% 630V	L91	1-410-780-11	INDUCTOR 27mH	
C85	1-136-433-11	FILM 100PF	5% 630V			< TRANSISTOR >	
C86	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V	Q51	8-729-808-01	TRANSISTOR 2SD1622-S	
C87	1-136-273-91	FILM 75PF	5% 630V	Q52	8-729-808-01	TRANSISTOR 2SD1622-S	
C88	1-163-003-11	CERAMIC CHIP 330PF	10% 50V	Q53	8-729-808-01	TRANSISTOR 2SD1622-S	
C89	1-124-234-00	ELECT 22uF	20% 16V	Q71	8-729-216-22	TRANSISTOR 2SA1162	
C90	1-107-045-00	MICA 3.9PF	500V				

AUDIO

MAIN

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R11	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W	
R13	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R14	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R21	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
R23	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
R51	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R52	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R53	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R54	1-216-309-00	METAL CHIP 5.6 5% 1/10W	
R55	1-216-309-00	METAL CHIP 5.6 5% 1/10W	
R57	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R71	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R81	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R82	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R83	1-216-001-00	METAL CHIP 10 5% 1/10W	
R84	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R85	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R91	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R92	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R93	1-216-001-00	METAL CHIP 10 5% 1/10W	
R94	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R95	1-216-075-00	METAL CHIP 12K 5% 1/10W	
< VARIABLE RESISTOR >			
RV11	1-238-012-11	RES. ADJ. CARBON 1K	
RV21	1-238-012-11	RES. ADJ. CARBON 1K	
RV71	1-238-016-11	RES. ADJ. CARBON 10K	
RV72	1-238-016-11	RES. ADJ. CARBON 10K	
RV81	1-238-548-11	RES. ADJ. CARBON 22K	
RV91	1-238-548-11	RES. ADJ. CARBON 22K	
< RELAY >			
RY31	1-515-726-11	RELAY	
< TRANSFORMER >			
T51	1-406-417-11	COIL, BIAS OSCILLATION	
T81	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	
T91	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	

Ref. No.	Part No.	Description	Remark
< TEST PIN >			
TP81	* 1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	

* A-2006-442-A MAIN BOARD, COMPLETE			

* 1-533-213-31 HOLDER, FUSE			
* 1-533-213-31 HOLDER, FUSE			
* 4-363-147-00 HEAT SINK, H. PIN			
7-685-646-79 SCREW +BVTP 3X8 TYPE2. IT-3			
7-682-547-04 SCREW +BVTT 3X6 (S)			
< CAPACITOR >			
C101	1-126-301-11	ELECT 1uF 20% 50V	
C102	1-136-157-00	FILM 0.022uF 5% 50V	
C103	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C104	1-126-059-11	ELECT 10uF 20% 50V	
C105	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C106	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C107	1-136-174-00	FILM 0.56uF 5% 50V	
C108	1-136-171-00	FILM 0.33uF 5% 50V	
C109	1-126-059-11	ELECT 10uF 20% 50V	
C110	1-126-059-11	ELECT 10uF 20% 50V	
C111	1-126-300-11	ELECT 0.47uF 20% 50V	
C112	1-126-162-11	ELECT 3.3uF 20% 50V	
C113	1-126-059-11	ELECT 10uF 20% 50V	
C114	1-126-300-11	ELECT 0.47uF 20% 50V	
C115	1-126-162-11	ELECT 3.3uF 20% 50V	
C116	1-130-476-00	MYLAR 0.0027uF 5% 50V	
C201	1-126-301-11	ELECT 1uF 20% 50V	
C202	1-136-157-00	FILM 0.022uF 5% 50V	
C203	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C204	1-126-059-11	ELECT 10uF 20% 50V	
C205	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C206	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C207	1-136-174-00	FILM 0.56uF 5% 50V	
C208	1-136-171-00	FILM 0.33uF 5% 50V	
C209	1-126-059-11	ELECT 10uF 20% 50V	
C210	1-126-059-11	ELECT 10uF 20% 50V	
C211	1-126-300-11	ELECT 0.47uF 20% 50V	
C212	1-126-162-11	ELECT 3.3uF 20% 50V	
C213	1-126-059-11	ELECT 10uF 20% 50V	
C214	1-126-300-11	ELECT 0.47uF 20% 50V	
C215	1-126-162-11	ELECT 3.3uF 20% 50V	
C216	1-130-476-00	MYLAR 0.0027uF 5% 50V	
C501	1-124-994-11	ELECT 100uF 20% 10V	
C502	1-124-994-11	ELECT 100uF 20% 10V	
C503	1-126-059-11	ELECT 10uF 20% 50V	

MAIN

Ref. No.	Part No.	Description	Remark
C504	1-126-059-11	ELECT 10uF 20% 50V	
C505	1-126-022-11	ELECT 47uF 20% 16V	
C506	1-126-059-11	ELECT 10uF 20% 50V	
C601	1-126-161-11	ELECT 2.2uF 20% 50V	
C602	1-162-286-31	CERAMIC 220PF 10% 50V	
C603	1-161-494-00	CERAMIC 0.022uF 25V	
C604	1-126-161-11	ELECT 2.2uF 20% 50V	
C605	1-162-286-31	CERAMIC 220PF 10% 50V	
C606	1-126-161-11	ELECT 2.2uF 20% 50V	
C607	1-126-161-11	ELECT 2.2uF 20% 50V	
C701	1-126-059-11	ELECT 10uF 20% 50V	
C702	1-124-894-11	ELECT 6800uF 20% 16V	
C703	1-124-894-11	ELECT 6800uF 20% 16V	
C704	1-124-910-11	ELECT 47uF 20% 50V	
C705	1-126-824-11	ELECT 6800uF 20% 6.3V	
C706	1-126-022-11	ELECT 47uF 20% 16V	
C707	1-126-022-11	ELECT 47uF 20% 16V	
C708	1-126-928-11	ELECT 3300uF 20% 10V	
C709	1-126-928-11	ELECT 3300uF 20% 10V	
C710	△ 1-136-157-00	FILM 0.022uF 5% 50V	
C801	1-124-994-11	ELECT 100uF 20% 10V	
C802	1-124-997-11	ELECT 470uF 20% 10V	
C803	1-126-301-11	ELECT 1uF 20% 50V	
C804	1-161-494-00	CERAMIC 0.022uF 25V	
C805	1-126-059-11	ELECT 10uF 20% 50V	
C806	1-126-059-11	ELECT 10uF 20% 50V	
C807	1-136-165-00	FILM 0.1uF 5% 50V	
C808	1-136-165-00	FILM 0.1uF 5% 50V	
C809	1-126-300-11	ELECT 0.47uF 20% 50V	
C810	1-162-288-31	CERAMIC 330PF 10% 50V	
C811	1-162-288-31	CERAMIC 330PF 10% 50V	
C812	1-126-059-11	ELECT 10uF 20% 50V	
< CONNECTOR >			
CN501	* 1-568-836-11	SOCKET, CONNECTOR 17P	
CN502	* 1-568-824-11	SOCKET, CONNECTOR 5P	
CN503	* 1-580-824-11	PLUG, CONNECTOR	
CN504	* 1-564-337-00	PIN, CONNECTOR 3P	
CN702	* 1-564-337-00	PIN, CONNECTOR 3P	
CN801	* 1-568-842-11	SOCKET, CONNECTOR 27P	
CN802	* 1-568-828-11	SOCKET, CONNECTOR 9P	
CN803	* 1-568-828-11	SOCKET, CONNECTOR 9P	
CN804	* 1-564-505-11	PLUG, CONNECTOR 2P	
CN806	* 1-580-824-11	PLUG, CONNECTOR	
CN901	* 1-580-824-11	PLUG, CONNECTOR	
CN902	* 1-580-824-11	PLUG, CONNECTOR	
CNP501	* 1-568-836-11	SOCKET, CONNECTOR 17P	
CNP701	* 1-564-518-11	PLUG, CONNECTOR 3P	

Ref. No.	Part No.	Description	Remark
< DIODE >			
D501	8-719-933-39	DIODE UZS6C1L	
D601	8-719-912-20	DIODE 1SS120	
D701	8-719-200-77	DIODE 10E2N	
D702	8-719-200-77	DIODE 10E2N	
D703	8-719-200-77	DIODE 10E2N	
D704	8-719-200-77	DIODE 10E2N	
D705	8-719-200-77	DIODE 10E2N	
D706	8-719-200-77	DIODE 10E2N	
D707	8-719-912-20	DIODE 1SS120	
D708	8-719-000-78	DIODE UZL-7L2	
D709	8-719-933-33	DIODE UZS6A1L	
D710	8-719-933-33	DIODE UZS6A1L	
D801	8-719-001-33	DIODE UZL-11L1	
D802	8-719-200-77	DIODE 10E2N	
D803	8-719-912-20	DIODE 1SS120	
D804	8-719-912-20	DIODE 1SS120	
< IC >			
IC501	8-752-035-94	IC CXA1331S	
IC502	8-759-140-53	IC uPD4053BC	
IC503	8-752-055-61	IC CXA1578P	
IC504	8-752-055-61	IC CXA1578P	
IC505	8-759-945-58	IC RC4558P	
IC506	8-759-634-51	IC M5218AP	
IC701	8-759-945-58	IC RC4558P	
IC801	8-759-636-53	IC M50944-170SP	
IC802	8-759-207-05	IC TA7272P	
IC803	8-759-240-50	IC TC4050BP	
IC804	8-759-000-48	IC MC14052BCP	
IC805	8-759-000-48	IC MC14052BCP	
< JACK >			
J501	1-565-258-11	JACK, PIN 4P (LINE IN/OUT)	
< FILTER >			
LPF101	1-231-388-00	FILTER, LOW PASS	
LPF201	1-231-388-00	FILTER, LOW PASS	
< TRANSISTOR >			
Q101	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q102	8-729-900-74	TRANSISTOR DTC143TS	
Q103	8-729-900-74	TRANSISTOR DTC143TS	
Q201	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q202	8-729-900-74	TRANSISTOR DTC143TS	
Q203	8-729-900-74	TRANSISTOR DTC143TS	
Q501	8-729-900-61	TRANSISTOR DTA114ES	
Q502	8-729-900-61	TRANSISTOR DTA114ES	

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q503	8-729-900-74	TRANSISTOR DTC143TS		R125	1-249-429-11	CARBON 10K 5%	1/4W
Q504	8-729-900-74	TRANSISTOR DTC143TS		R126	1-249-441-11	CARBON 100K 5%	1/4W
Q601	8-729-900-89	TRANSISTOR DTC144ES		R201	1-249-417-11	CARBON 1K 5%	1/4W
Q602	8-729-119-76	TRANSISTOR 2SA1175-HFE		R202	1-249-433-11	CARBON 22K 5%	1/4W
Q603	8-729-900-61	TRANSISTOR DTA114ES		R203	1-247-858-11	CARBON 13K 5%	1/4W
				R204	1-249-421-11	CARBON 2.2K 5%	1/4W
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q702	8-729-111-55	TRANSISTOR 2SD1312-K		R205	1-249-421-11	CARBON 2.2K 5%	1/4W
Q703	8-729-900-89	TRANSISTOR DTC144ES		R206	1-249-421-11	CARBON 2.2K 5%	1/4W
Q704	8-729-900-85	TRANSISTOR DTC144WS		R207	1-247-887-00	CARBON 220K 5%	1/4W
Q705	8-729-924-90	TRANSISTOR 2SB1370-EF		R208	1-249-423-11	CARBON 3.3K 5%	1/4W
				R209	1-249-423-11	CARBON 3.3K 5%	1/4W
Q706	8-729-111-55	TRANSISTOR 2SD1312-K					
Q801	8-729-119-76	TRANSISTOR 2SA1175-HFE		R210	1-249-428-11	CARBON 8.2K 5%	1/4W
Q802	8-729-900-61	TRANSISTOR DTA114ES		R211	1-247-864-11	CARBON 24K 5%	1/4W
Q803	8-729-620-05	TRANSISTOR 2SC2603-EF		R212	1-249-414-11	CARBON 560 5%	1/4W
Q804	8-729-620-05	TRANSISTOR 2SC2603-EF		R213	1-249-417-11	CARBON 1K 5%	1/4W
				R214	1-249-421-11	CARBON 2.2K 5%	1/4W
Q805	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q806	8-729-119-76	TRANSISTOR 2SA1175-HFE		R215	1-249-429-11	CARBON 10K 5%	1/4W
Q807	8-729-900-61	TRANSISTOR DTA114ES		R216	1-249-421-11	CARBON 2.2K 5%	1/4W
Q808	8-729-900-89	TRANSISTOR DTC144ES		R217	1-249-429-11	CARBON 10K 5%	1/4W
Q809	8-729-801-84	TRANSISTOR 2SB1013-4		R218	1-249-434-11	CARBON 27K 5%	1/4W
				R219	1-249-432-11	CARBON 18K 5%	1/4W
Q810	8-729-801-84	TRANSISTOR 2SB1013-4					
Q811	8-729-900-61	TRANSISTOR DTA114ES		R220	1-249-429-11	CARBON 10K 5%	1/4W
Q812	8-729-900-61	TRANSISTOR DTA114ES		R221	1-249-429-11	CARBON 10K 5%	1/4W
< RESISTOR >				R222	1-249-431-11	CARBON 15K 5%	1/4W
R101	1-249-417-11	CARBON 1K 5%	1/4W	R223	1-249-409-11	CARBON 220 5%	1/4W
R102	1-249-433-11	CARBON 22K 5%	1/4W	R224	1-249-429-11	CARBON 10K 5%	1/4W
R103	1-247-858-11	CARBON 13K 5%	1/4W				
R104	1-249-421-11	CARBON 2.2K 5%	1/4W	R225	1-249-429-11	CARBON 10K 5%	1/4W
R105	1-249-421-11	CARBON 2.2K 5%	1/4W	R226	1-249-441-11	CARBON 100K 5%	1/4W
				R501	1-249-429-11	CARBON 10K 5%	1/4W
R106	1-249-421-11	CARBON 2.2K 5%	1/4W	R502	1-249-429-11	CARBON 10K 5%	1/4W
R107	1-247-887-00	CARBON 220K 5%	1/4W	R503	1-249-429-11	CARBON 10K 5%	1/4W
R108	1-249-423-11	CARBON 3.3K 5%	1/4W				
R109	1-249-423-11	CARBON 3.3K 5%	1/4W	R504	1-249-434-11	CARBON 27K 5%	1/4W
R110	1-249-428-11	CARBON 8.2K 5%	1/4W	R505	1-249-417-11	CARBON 1K 5%	1/4W
				R506	1-249-429-11	CARBON 10K 5%	1/4W
R111	1-247-864-11	CARBON 24K 5%	1/4W	R507	1-247-862-11	CARBON 20K 5%	1/4W
R112	1-249-414-11	CARBON 560 5%	1/4W	R508	1-249-429-11	CARBON 10K 5%	1/4W
R113	1-249-417-11	CARBON 1K 5%	1/4W				
R114	1-249-421-11	CARBON 2.2K 5%	1/4W	R509	1-249-429-11	CARBON 10K 5%	1/4W
R115	1-249-429-11	CARBON 10K 5%	1/4W	R510	1-215-434-11	CARBON 27K 5%	1/4W
				R511	1-249-429-11	CARBON 10K 5%	1/4W
R116	1-249-421-11	CARBON 2.2K 5%	1/4W	R512	1-247-862-11	CARBON 20K 5%	1/4W
R117	1-249-429-11	CARBON 10K 5%	1/4W	R513	1-249-429-11	CARBON 10K 5%	1/4W
R118	1-249-434-11	CARBON 27K 5%	1/4W				
R119	1-249-432-11	CARBON 18K 5%	1/4W	R514	1-249-429-11	CARBON 10K 5%	1/4W
R120	1-249-429-11	CARBON 10K 5%	1/4W	R515	1-215-434-11	CARBON 27K 5%	1/4W
				R516	1-247-848-11	CARBON 5.1K 5%	1/4W
R121	1-249-429-11	CARBON 10K 5%	1/4W	R517	1-249-432-11	CARBON 18K 5%	1/4W
R122	1-249-431-11	CARBON 15K 5%	1/4W	R518	1-249-427-11	CARBON 6.8K 5%	1/4W
R123	1-249-409-11	CARBON 220 5%	1/4W	R519	1-247-848-11	CARBON 5.1K 5%	1/4W
R124	1-249-429-11	CARBON 10K 5%	1/4W				

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R520	1-249-432-11	CARBON	18K	5%	1/4W	R815	1-249-413-11	CARBON	470	5%	1/4W
R521	1-249-427-11	CARBON	6.8K	5%	1/4W	R816	1-249-410-11	CARBON	270	5%	1/4W
R522	1-249-429-11	CARBON	10K	5%	1/4W	R817	1-249-413-11	CARBON	470	5%	1/4W
R523	1-249-413-11	CARBON	470	5%	1/4W	R818	1-249-412-11	CARBON	390	5%	1/4W
R524	1-249-413-11	CARBON	470	5%	1/4W	R819	1-249-413-11	CARBON	470	5%	1/4W
R525	1-249-429-11	CARBON	10K	5%	1/4W	R820	1-249-413-11	CARBON	470	5%	1/4W
R526	1-249-441-11	CARBON	100K	5%	1/4W	R821	1-249-412-11	CARBON	390	5%	1/4W
R527	1-249-435-11	CARBON	33K	5%	1/4W	R822	1-249-412-11	CARBON	390	5%	1/4W
R528	1-249-435-11	CARBON	33K	5%	1/4W	R823	1-249-410-11	CARBON	270	5%	1/4W
R601	1-247-887-00	CARBON	220K	5%	1/4W	R824	1-249-412-11	CARBON	390	5%	1/4W
R602	1-249-425-11	CARBON	4.7K	5%	1/4W	R825	1-249-422-11	CARBON	2.7K	5%	1/4W
R603	1-249-441-11	CARBON	100K	5%	1/4W	R826	1-249-422-11	CARBON	2.7K	5%	1/4W
R604	1-249-428-11	CARBON	8.2K	5%	1/4W	R827	1-249-422-11	CARBON	2.7K	5%	1/4W
R605	1-249-423-11	CARBON	3.3K	5%	1/4W	R828	1-249-422-11	CARBON	2.7K	5%	1/4W
R606	1-249-441-11	CARBON	100K	5%	1/4W	R829	1-249-422-11	CARBON	2.7K	5%	1/4W
R607	1-249-417-11	CARBON	1K	5%	1/4W	R830	1-249-422-11	CARBON	2.7K	5%	1/4W
R608	1-249-441-11	CARBON	100K	5%	1/4W	R831	1-249-415-11	CARBON	680	5%	1/4W
R609	1-249-429-11	CARBON	10K	5%	1/4W	R832	1-249-429-11	CARBON	10K	5%	1/4W
R610	1-249-441-11	CARBON	100K	5%	1/4W	R833	1-249-415-11	CARBON	680	5%	1/4W
R611	1-249-417-11	CARBON	1K	5%	1/4W	R834	1-249-429-11	CARBON	10K	5%	1/4W
R612	1-249-435-11	CARBON	33K	5%	1/4W	R835	1-249-437-11	CARBON	47K	5%	1/4W
R701	1-247-752-11	CARBON	1K	5%	1/2W	R836	1-247-866-11	CARBON	30K	5%	1/4W
R702	1-249-425-11	CARBON	4.7K	5%	1/4W	R837	1-249-434-11	CARBON	27K	5%	1/4W
R703	1-249-437-11	CARBON	47K	5%	1/4W	R838	1-249-425-11	CARBON	4.7K	5%	1/4W
R704	1-249-437-11	CARBON	47K	5%	1/4W	R839	1-247-862-11	CARBON	20K	5%	1/4W
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	R840	1-247-872-11	CARBON	51K	5%	1/4W
R706	1-249-425-11	CARBON	4.7K	5%	1/4W	R841	1-247-872-11	CARBON	51K	5%	1/4W
R707	1-249-427-11	CARBON	6.8K	5%	1/4W	R842	1-249-405-11	CARBON	100	5%	1/4W
R708	1-249-419-11	CARBON	1.5K	5%	1/4W	R843	1-249-437-11	CARBON	47K	5%	1/4W
R709	1-249-425-11	CARBON	4.7K	5%	1/4W	R844	1-247-866-11	CARBON	30K	5%	1/4W
R710	1-249-419-11	CARBON	1.5K	5%	1/4W	R845	1-249-434-11	CARBON	27K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W	R846	1-249-425-11	CARBON	4.7K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W	R847	1-247-862-11	CARBON	20K	5%	1/4W
R713	1-249-427-11	CARBON	6.8K	5%	1/4W	R848	1-247-872-11	CARBON	51K	5%	1/4W
R714	1-249-427-11	CARBON	6.8K	5%	1/4W	R849	1-247-872-11	CARBON	51K	5%	1/4W
R801	1-249-435-11	CARBON	33K	5%	1/4W	R850	1-249-405-11	CARBON	100	5%	1/4W
R802	1-247-903-00	CARBON	1M	5%	1/4W	R851	1-249-434-11	CARBON	27K	5%	1/4W
R803	1-249-428-11	CARBON	8.2K	5%	1/4W	R852	1-249-434-11	CARBON	27K	5%	1/4W
R804	1-247-836-11	CARBON	1.6K	5%	1/4W	R853	1-249-429-11	CARBON	10K	5%	1/4W
R805	1-249-429-11	CARBON	10K	5%	1/4W	R854	1-249-429-11	CARBON	10K	5%	1/4W
R806	1-249-429-11	CARBON	10K	5%	1/4W	R855	1-249-421-11	CARBON	2.2K	5%	1/4W
R807	1-247-891-00	CARBON	330K	5%	1/4W	R856	1-249-421-11	CARBON	2.2K	5%	1/4W
R808	1-247-891-00	CARBON	330K	5%	1/4W	R857	1-249-421-11	CARBON	2.2K	5%	1/4W
R809	1-249-442-11	CARBON	510	5%	1/4W	R858	1-249-435-11	CARBON	33K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W	R859	1-249-435-11	CARBON	33K	5%	1/4W
R811	1-249-410-11	CARBON	270	5%	1/4W	R860	1-249-435-11	CARBON	33K	5%	1/4W
R812	1-249-412-11	CARBON	390	5%	1/4W	R861	1-249-435-11	CARBON	33K	5%	1/4W
R813	1-249-413-11	CARBON	470	5%	1/4W	R862	1-249-435-11	CARBON	33K	5%	1/4W
R814	1-249-412-11	CARBON	390	5%	1/4W	R863	1-249-429-11	CARBON	10K	5%	1/4W

MAIN

PANEL

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV101	1-238-016-11	RES. ADJ. CARBON 10K	
RV102	1-238-016-11	RES. ADJ. CARBON 10K	
RV201	1-238-016-11	RES. ADJ. CARBON 10K	
RV202	1-238-016-11	RES. ADJ. CARBON 10K	

< CERAMIC >

X801	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
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* A-2006-443-A PANEL BOARD, COMPLETE

* 3-354-966-01 HOLDER (DIR), LED
* 3-354-972-01 HOLDER (METER), LED
* 3-362-478-21 HOLDER (T), LED

< CAPACITOR >

C301	1-126-163-11	ELECT	4.7uF	20%	50V
C302	1-126-301-11	ELECT	1uF	20%	50V
C401	1-126-163-11	ELECT	4.7uF	20%	50V
C402	1-126-301-11	ELECT	1uF	20%	50V
C901	1-124-589-11	ELECT	47uF	20%	16V

< CONNECTOR >

CNP502	* 1-568-848-11	SOCKET, CONNECTOR 5P	
CNP801	* 1-568-869-11	SOCKET, CONNECTOR 27P	

< DIODE >

D301	8-719-301-44	LED SEL2410E-D	
D302	8-719-301-44	LED SEL2410E-D	
D303	8-719-301-44	LED SEL2410E-D	
D304	8-719-301-44	LED SEL2410E-D	
D305	8-719-301-44	LED SEL2410E-D	
D306	8-719-301-38	LED SEL2210S-C	
D307	8-719-301-38	LED SEL2210S-C	
D308	8-719-301-38	LED SEL2210S-C	
D401	8-719-301-44	LED SEL2410E-D	
D402	8-719-301-44	LED SEL2410E-D	
D403	8-719-301-44	LED SEL2410E-D	
D404	8-719-301-44	LED SEL2410E-D	
D405	8-719-301-44	LED SEL2410E-D	
D406	8-719-301-38	LED SEL2210S-C	
D407	8-719-301-38	LED SEL2210S-C	
D408	8-719-301-38	LED SEL2210S-C	
D901	8-719-301-44	LED SEL2410E-D (A-PLAY)	
D902	8-719-301-52	LED SEL2810A-C (A-III)	
D903	8-719-301-38	LED SEL2210S-C (A-REC)	
D904	8-719-301-52	LED SEL2810A-C (A-▷)	

Ref.No.	Part No.	Description	Remark
D905	8-719-301-38	LED SEL2210S-C (A+B/REC)	
D906	8-719-301-44	LED SEL2410E-D (BLANK SKIP)	
D907	8-719-301-38	LED SEL2210S-C (HIGH)	
D908	8-719-301-52	LED SEL2810A-C (A-◁)	
D909	8-719-301-38	LED SEL2210S-C (NORM)	

D910	8-719-301-38	LED SEL2210S-C (B-REC)	
D911	8-719-301-52	LED SEL2810A-C (B-III)	
D912	8-719-301-52	LED SEL2810A-C (B-▷)	
D913	8-719-301-44	LED SEL2410E-D (B-PLAY)	
D914	8-719-301-52	LED SEL2810A-C (B-◁)	

< IC >

IC301	8-759-912-79	IC IR2E02	
IC401	8-759-912-79	IC IR2E02	
IC901	8-741-100-48	IC SBX1610-59	

< JACK >

J502	1-507-796-71	JACK (PHONES)	
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< RESISTOR >

R301	1-249-441-11	CARBON	100K	5%	1/4W
R302	1-249-432-11	CARBON	18K	5%	1/4W
R303	1-249-441-11	CARBON	100K	5%	1/4W
R304	1-249-438-11	CARBON	56K	5%	1/4W
R305	1-247-856-00	CARBON	11K	5%	1/4W
R306	1-249-424-11	CARBON	3.9K	5%	1/4W
R401	1-249-441-11	CARBON	100K	5%	1/4W
R402	1-249-432-11	CARBON	18K	5%	1/4W
R403	1-249-441-11	CARBON	100K	5%	1/4W
R404	1-249-438-11	CARBON	56K	5%	1/4W
R405	1-247-856-00	CARBON	11K	5%	1/4W
R406	1-249-424-11	CARBON	3.9K	5%	1/4W
R901	1-249-408-11	CARBON	180	5%	1/4W
R902	1-249-420-11	CARBON	1.8K	5%	1/4W
R903	1-249-417-11	CARBON	1K	5%	1/4W
R904	1-249-415-11	CARBON	680	5%	1/4W
R905	1-249-413-11	CARBON	470	5%	1/4W
R906	1-249-411-11	CARBON	330	5%	1/4W
R907	1-249-409-11	CARBON	220	5%	1/4W
R908	1-249-407-11	CARBON	150	5%	1/4W
R909	1-249-420-11	CARBON	1.8K	5%	1/4W
R910	1-249-417-11	CARBON	1K	5%	1/4W
R911	1-249-415-11	CARBON	680	5%	1/4W
R912	1-249-413-11	CARBON	470	5%	1/4W
R913	1-249-411-11	CARBON	330	5%	1/4W
R914	1-249-409-11	CARBON	220	5%	1/4W
R915	1-249-407-11	CARBON	150	5%	1/4W
R916	1-249-424-11	CARBON	3.9K	5%	1/4W
R917	1-249-424-11	CARBON	3.9K	5%	1/4W

PANEL

SW

Ref. No.	Part No.	Description	Remark
R918	1-249-411-11	CARBON 330 5% 1/4W	
R919	1-249-409-11	CARBON 220 5% 1/4W	
R920	1-249-407-11	CARBON 150 5% 1/4W	

< VARIABLE RESISTOR >

RV501	1-241-502-11	RES. VAR. CARBON 50K/50K (REC LEVEL)	
RV502	1-241-503-11	RES. VAR. CARBON 50K/50K (BALANCE)	

< SWITCH >

S701	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
S901	1-572-401-11	SWITCH, SLIDE (DIR MODE)	
S902	1-572-401-11	SWITCH, SLIDE (DOLBY NR)	
S903	1-554-596-21	SWITCH, KEY BOARD (B REC)	
S904	1-554-596-21	SWITCH, KEY BOARD (B FF)	
S905	1-554-596-21	SWITCH, KEY BOARD (B REW)	
S906	1-554-596-21	SWITCH, KEY BOARD (A REC MUTE)	
S907	1-554-596-21	SWITCH, KEY BOARD (A PAUSE)	
S908	1-554-596-21	SWITCH, KEY BOARD (A REV)	
S909	1-554-596-21	SWITCH, KEY BOARD (A FWD)	
S910	1-554-596-21	SWITCH, KEY BOARD (A STOP)	
S911	1-554-596-21	SWITCH, KEY BOARD (A REC)	
S912	1-554-596-21	SWITCH, KEY BOARD (A FF)	
S913	1-554-596-21	SWITCH, KEY BOARD (A REW)	
S914	1-554-596-21	SWITCH, KEY BOARD (B REC MUTE)	
S915	1-554-596-21	SWITCH, KEY BOARD (B PAUSE)	
S916	1-554-596-21	SWITCH, KEY BOARD (B REV)	
S917	1-554-596-21	SWITCH, KEY BOARD (B FWD)	
S918	1-554-596-21	SWITCH, KEY BOARD (B STOP)	
S919	1-554-596-21	SWITCH, KEY BOARD (BLANK SKIP)	
S920	1-554-596-21	SWITCH, KEY BOARD (A+B REC)	
S921	1-554-596-21	SWITCH, KEY BOARD (NORM SPEED)	
S922	1-554-596-21	SWITCH, KEY BOARD (HIGH SPEED)	

* 1-634-841-11 SW BOARD

3-343-419-01 HOLDER (S SENSER A)

< CONNECTOR >

CNP81 * 1-568-852-11 SOCKET, CONNECTOR 9P

< IC >

IC81 8-719-710-03 PHOTO INTERRUPTOR NJL5165K-B

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	

< SWITCH >

S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82	1-571-281-21	SWITCH, LEAF (70EQ)	
S83	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (REC A)	
S85	1-571-281-21	SWITCH, LEAF (REC B)	
S86	1-571-281-21	SWITCH, LEAF (HALF)	

MISCELLANEOUS

7	1-590-826-11	WIRE, FLAT TYPE (27 CORE)	
8	1-575-663-11	WIRE, FLAT TYPE (5 CORE)	
10	Δ 1-551-188-XX	CORD, POWER (E)	
10	Δ 1-551-506-XX	CORD, POWER (US, Canadian)	
10	Δ 1-555-795-00	CORD, POWER, EULO PLUG (AEP, G)	
10	Δ 1-556-035-00	CORD, POWER (UK)	
11	Δ 1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
12	1-575-218-11	WIRE, FLAT TYPE (17 CORE)	
54	1-548-596-41	COUNTER, TAPE (MIDDLE TYPE)	
71	* 1-575-850-11	WIRE, FLAT TYPE (9 CORE)	
F701	Δ 1-532-285-00	FUSE, TIME-LAG 1.25A (AEP, UK, G, E)	
F701	Δ 1-532-741-11	FUSE, GLASS TUBE 1.6A (US, Canadian)	
F702	Δ 1-532-285-00	FUSE, TIME-LAG 1.25A (AEP, UK, G, E)	
F702	Δ 1-532-741-11	FUSE, GLASS TUBE 1.6A (US, Canadian)	
HRPE101	A-2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE)	
M1	X-3359-417-1	MOTOR (CAPSTAN) ASSY	
M2	A-2003-474-A	MOTOR (REEL) ASSY	
T701	Δ 1-449-420-21	TRANSFORMER, POWER (US, Canadian)	
T701	Δ 1-449-666-21	TRANSFORMER, POWER (E)	
T701	Δ 1-450-465-11	TRANSFORMER, POWER (AEP, UK, G)	
VS901	Δ 1-570-307-11	SWITCH, VOLTAGE CHANGE (VOLTAGE) (E)	

ACCESSORY & PACKING MATERIAL

1-559-533-11	CORD, CONNECTION	
* 3-354-918-81	INDIVIDUAL CARTON	
* 3-359-942-01	CUSHION	
3-703-450-01	INSTRUCTION (US)	
3-753-200-11	MANUAL, INSTRUCTION (AEP, Canadian, UK, E)	
	(ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
3-753-200-41	MANUAL, INSTRUCTION (AEP)	
	(GERMAN, DUTCH, SWEDISH, ITALIAN)	
3-753-200-51	MANUAL, INSTRUCTION (G) (GERMAN)	

Ref. No.	Part No.	Description	Remark
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HARDWARE LIST

# 1	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S (E)	
# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 3	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 4	7-682-548-09	SCREW +BVTT 3X8 (S)	
# 5	7-621-773-95	SCREW +BVTT 2.6X6 (S)	
# 6	7-621-773-93	SCREW (PANEL 2.6 TP2)	
# 7	7-621-775-00	SCREW +B 2.6X3	
# 8	7-627-556-08	SCREW +P 2.6X2.8	

TC-WR670

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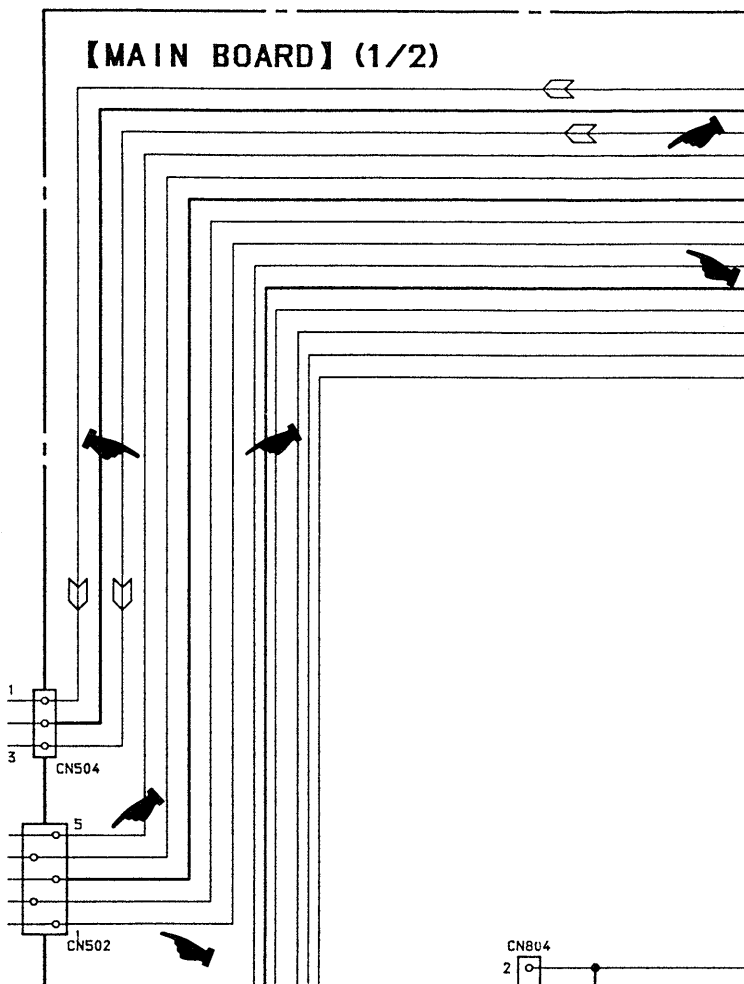
US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-1

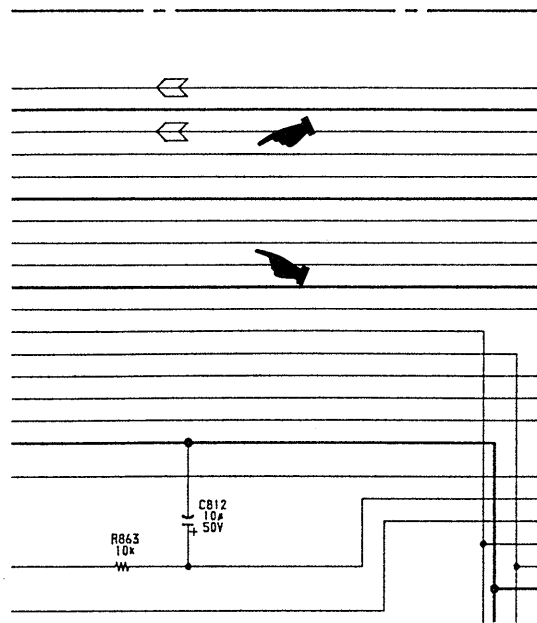
File this supplement with the service manual.

The Australian Model is added to the Service Manual released previously.
Please utilize it since its contents are same as those of UK Model.

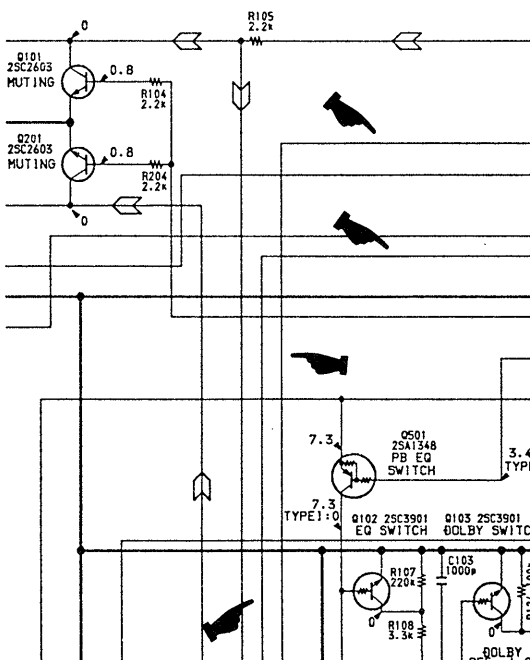
- Service Manual Page 18 – 19.
(Location A – F, 8 – 12)



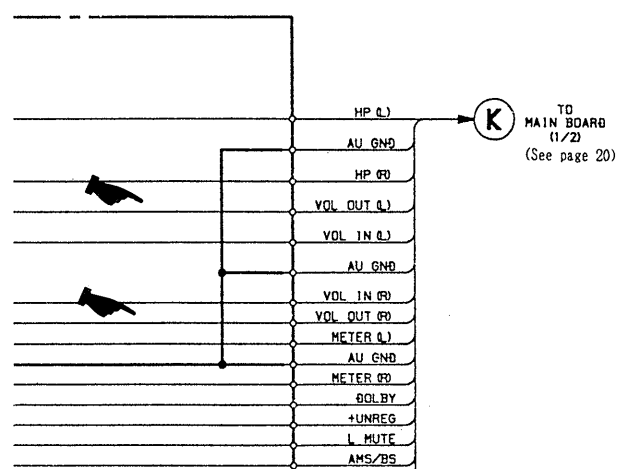
- Service Manual Page 20.
(Location A – D, 21 – 23)



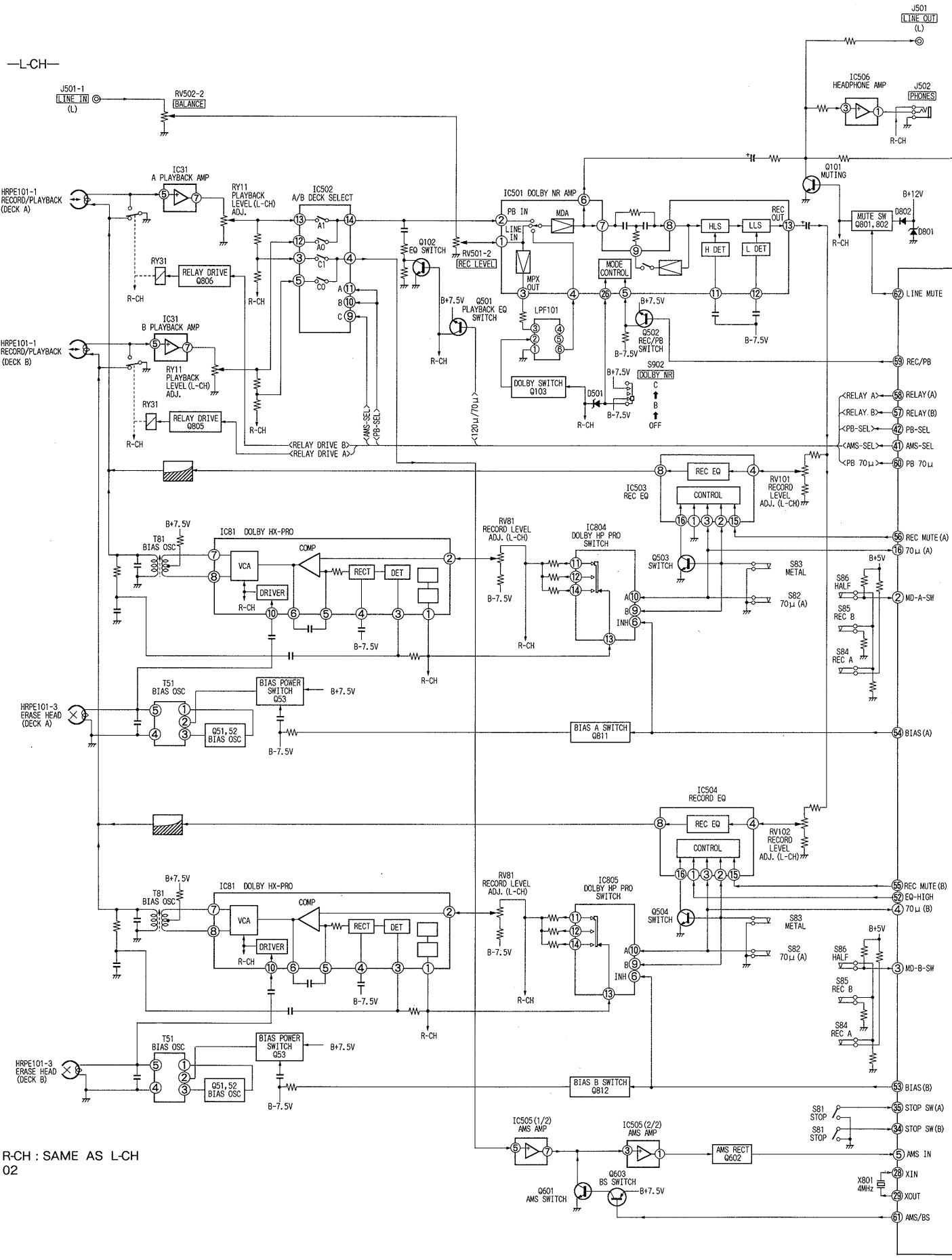
- Service Manual Page 21 – 22.
(Location A – E, 6 – 9)



- Service Manual Page 23.
(Location A – C, 20 – 23)



1. BLOCK DIAGRAMS



R-CH : SAME AS L-CH
02

